NetGuard EVS

Learning Guide

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Introduction

This document is presented by On-Net Surveillance Systems Inc. (OnSSI) for the purpose of self training for general competency in navigation and use of our NVR client, NetGuard-EVS.

Note:

This guide assumes that the OnSSI NVR, NetDVMS 6.5x is in use.

For more information on OnSSI training or support documentation, *see our website at:* www.onssi.com

Module 1

Getting Started with IP Video

Objectives:

- Review the Video Surveillance Environment
- Review the OnSSI Product Suite

Video Surveillance System Overview

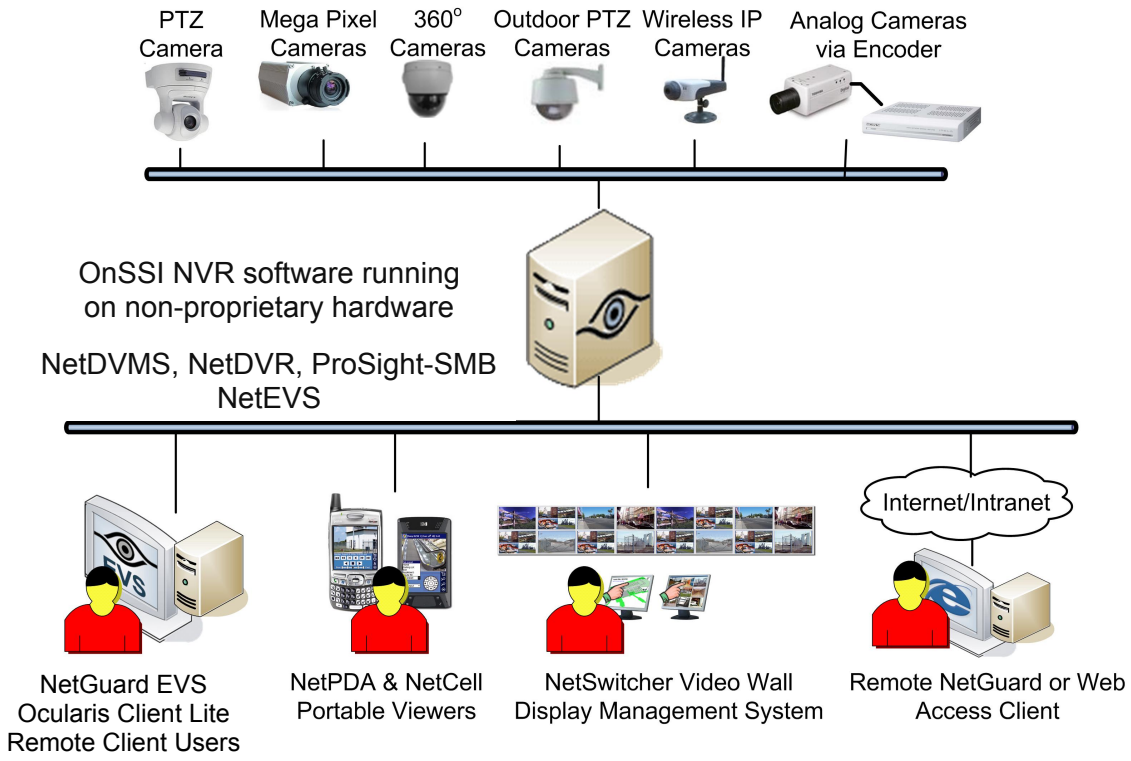


Figure 1 - Video Surveillance System Overview

The video surveillance system environment can be simplified by focusing on three categories:

1. Input devices (Cameras and other devices) used to capture information
2. Processing devices (Hardware & Software) used to compile and manage captured data
3. Output devices (Monitors, Mobile devices, Video Walls, Internet Browser) to view captured data

OnSSI Product Suite

Where does OnSSI fit in the Video Surveillance System?

In order to meet the needs of the Video Surveillance System discussed in Figure 1, OnSSI provides the following solutions.

1. Input devices (Cameras) used to capture the information

   OnSSI supports hundreds of IP cameras and continues to add driver support for new cameras on a daily basis. Updated driver packs may be downloaded from the website www.onssi.com.

2. Processing devices (Hardware & Software) used to compile and manage captured data

   Hardware:

   OnSSI supports non-proprietary hardware to run its software and maintain recorded video. See www.onssi.com for the latest hardware requirements for our applications.

   Software:

   OnSSI provides several software applications to manage the hardware or Network Video Recorder (NVR):

   - **NetEVS** – Enterprise wide IP Video Surveillance Management System
   - **NetDVMS** – Large scale IP Video Surveillance Management System
   - **NetDVR** – NVR Software for Medium-Scale Surveillance Deployments
   - **ProSight-SMB** – IP Video Surveillance Platform for Small-Medium Businesses

   For more information and a product comparison on OnSSI NVR software, see the *Product Comparison Chart* ***Error! Reference source not found.***on our website.

3. Output devices (Monitors, Mobile devices, Video Walls, Internet Browser) to view captured data

   In order for video output to be viewed on output devices, OnSSI provides several client application software options:

   ### Local, Remote & Web Access

   - **Ocularis Client Lite** - Ocularis Client Lite is OnSSI's breakthrough video client for its entire line of Network Video Recorders. It provides the tools to efficiently and effectively monitor large camera arrays, access and investigate video of incidents and export evidence, all through an intuitive, touch screen-optimized (optional) user interface.
   - **NetGuard EVS** - The NetGuard-EVS video client is a robust video monitoring and investigation interface used in conjunction with OnSSI's NetDVMS, NetDVR or ProSight-SMB.
   - **NetGuard** - The NetGuard video client is the ideal tool for monitoring and investigating video over the Internet, or whenever the user can not or does not wish to install a video client software (for example, when the user does not have administrative rights to the PC).

   ### Portable Video

   - **NetPDA and NetCell Portable Video Clients** - NetPDA and NetCell provide the ability to monitor and control live cameras and even investigate incidents on the fly, all from a Windows CE/Mobile-enabled PDA or Smartphone.

Control Room Video-Wall Management System

- **NetSwitcher** Virtual Video Matrix Switch - An advanced IP-based Control Room Video Wall Controller, NetSwitcher allows the operator to call any camera to any monitor on the control-room video wall, and provides for automated event-driven pop-ups of specific camera views, as well as invaluable after-the-fact investigation tools.

Module 2

Downloading NetGuard-EVS

Objectives:

- Download NetGuard-EVS from an NVR Server

Downloading A Video Client

This document assumes that an NVR, such as NetDVMS, has already been installed and configured on a server PC. For additional information on NetDVMS, refer to the *NetDVMS User Manual*

The next step is to load a client application, such as NetGuard-EVS, onto each workstation in order to view video from that workstation.

> ***Note**:*
> *By default, NetGuard EVS is downloaded on the server automatically when installing NetDVMS. This procedure applies to workstations which will view video from the server.*

To Access the OnSSI Video Clients Download Page

1. Open a browser (*Microsoft Internet Explorer* or *Mozilla Firefox*).
2. Type the NVR server address in the browser URL field using the following format:

   `http://IPAddress:Port #`

   Where:

   IP address is the server IP address

   The Port # is the communication port as defined in the NetDVMS *Image Server Administrator*. (If using port 80, the "`:Port #`" portion may be omitted)

   For example:

   `http://192.168.7.236:8080`

   ➲ The resulting page is displayed:

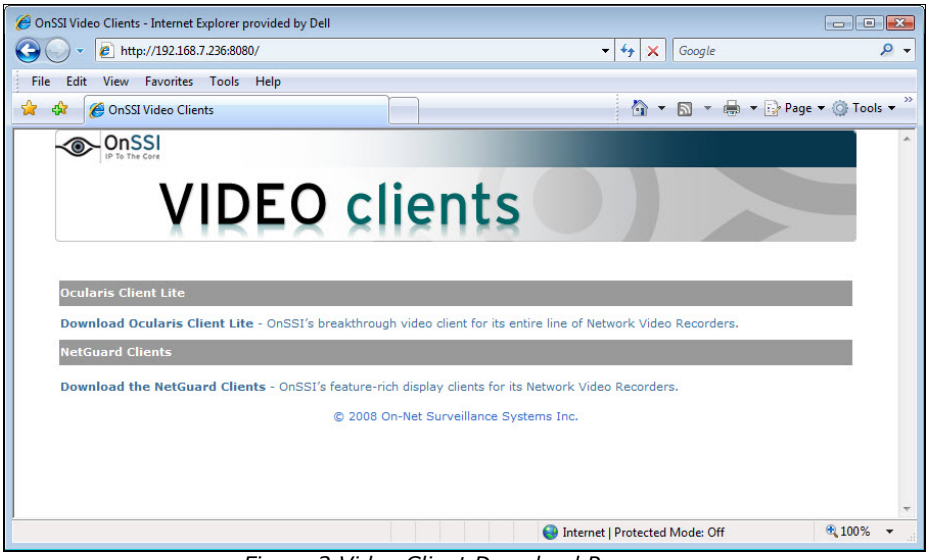

OnSSI Video Clients - Internet Explorer provided by Dell
http://192.168.7.236:8080/
Google
File Edit View Favorites Tools Help
OnSSI Video Clients
Page Tools
OnSSI
VIDEO clients
Ocularis Client Lite
Download Ocularis Client Lite - OnSSI's breakthrough video client for its entire line of Network Video Recorders.
NetGuard Clients
Download the NetGuard Clients - OnSSI's feature-rich display clients for its Network Video Recorders.
© 2008 On-Net Surveillance Systems Inc.
Internet | Protected Mode: Off
100%

Figure 2 Video Client Download Page

To Download NetGuard EVS

1. From the OnSSI Video Clients download page (as shown in Figure 2 on page 2-2) click the link:

   Download the NetGuard Clients

   ➲ NetGuard clients download page appears.*

2. Click the link for the language within the *NetGuard EVS* Installer section. *English* is shown in the example below.

   ➲ The following appears:

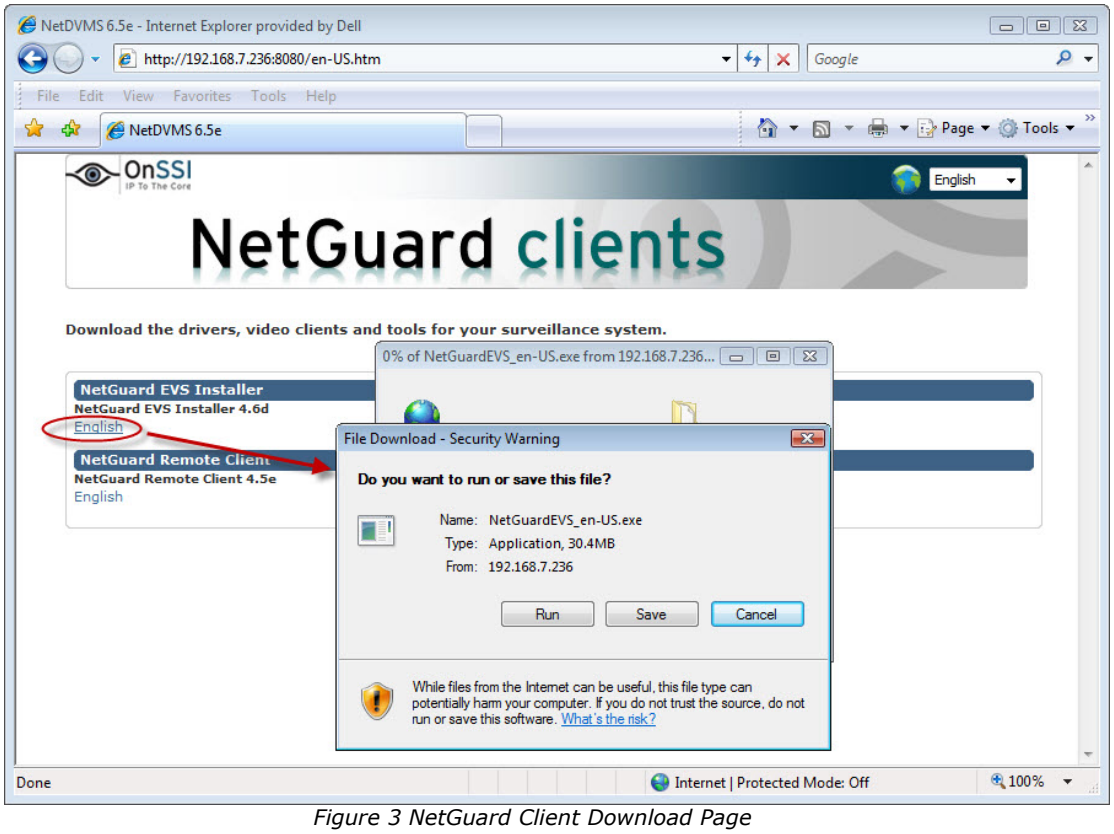

NetDVMS 6.5e - Internet Explorer provided by Dell
http://192.168.7.236:8080/en-US.htm
NetDVMS 6.5e
OnSSI
English
NetGuard clients
Download the drivers, video clients and tools for your surveillance system.
NetGuard EVS Installer
NetGuard EVS Installer 4.6d
English
NetGuard Remote Client
NetGuard Remote Client 4.5e
English
0% of NetGuardEVS_en-US.exe from 192.168.7.236...
File Download - Security Warning
Do you want to run or save this file?
Name: NetGuardEVS_en-US.exe
Type: Application, 30.4MB
From: 192.168.7.236
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?
Done
Internet | Protected Mode: Off
100%

Figure 3 NetGuard Client Download Page

3. Click **Save** and store the file on the local drive.

   ➲ The file **NetGuardEVS_en-US.exe** is downloaded to the location of your choosing. (The file name for non-English versions will differ slightly).

4. Run the downloaded executable from each workstation to install *NetGuard EVS*.

---

* *The items shown on the page may be configured by the administrator through the NVR Download Manager. Therefore, your screen may differ from the one shown here.*

Module 3

OnSSI Client Software – NetGuard EVS

Objectives:

- Review General Features
- Logging In
- Creating and Configuring Views
- Modifying Views
- Viewing Live Video
- Working with PTZ Cameras
- Viewing Recorded Video
- Exporting Recorded Video

NetGuard EVS Features

NetGuard EVS is a client application used to:

- Access server data
- View and control live cameras
- Playback stored video images

NetGuard EVS Requirements

NetGuard EVS must be installed locally on a PC with Microsoft .NET framework 2.0

Log In to NetGuard EVS

Launch the NetGuard EVS application by one of the following methods:

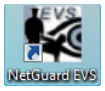
- Use the Windows menu: ***Start→All Programs→NetGuard EVS→NetGuard EVS***
- Use the desktop icon to launch *NetGuard EVS*. 

Figure 4 NetGuard EVS Login Screen

NetGuard EVS works with the *Administrator* and *Image Server* Modules from the NetDVMS, NetDVR or ProSight SMB NVR products.

Server Address	The URL or IP address of the NVR server. Port numbers may be required as in the following example: **http://123.123.123.123:82** where 82 is the port number. The prefix "**http://**" is required. You may use the text "localhost" as shown in the example above if connecting to the local PC.
Authentication	Select the Authentication as defined by the NVR system administrator during account setup. Options are: Basic Authentication, Windows Authentication (current user), Windows Authentication.
User name	Case sensitive; only used in Basic Authentication or Windows Authentication
Password	Password for the user account; only used in Basic Authentication and Windows Authentication.
Remember password	When clicked, allows NetGuard EVS to remember your password for subsequent logins.
Auto-login	When clicked, the system will automatically bypass the login screen for and go directly to the application for all future logins.

Table 1 Login Settings

The OnSSI NetGuard EVS Interface

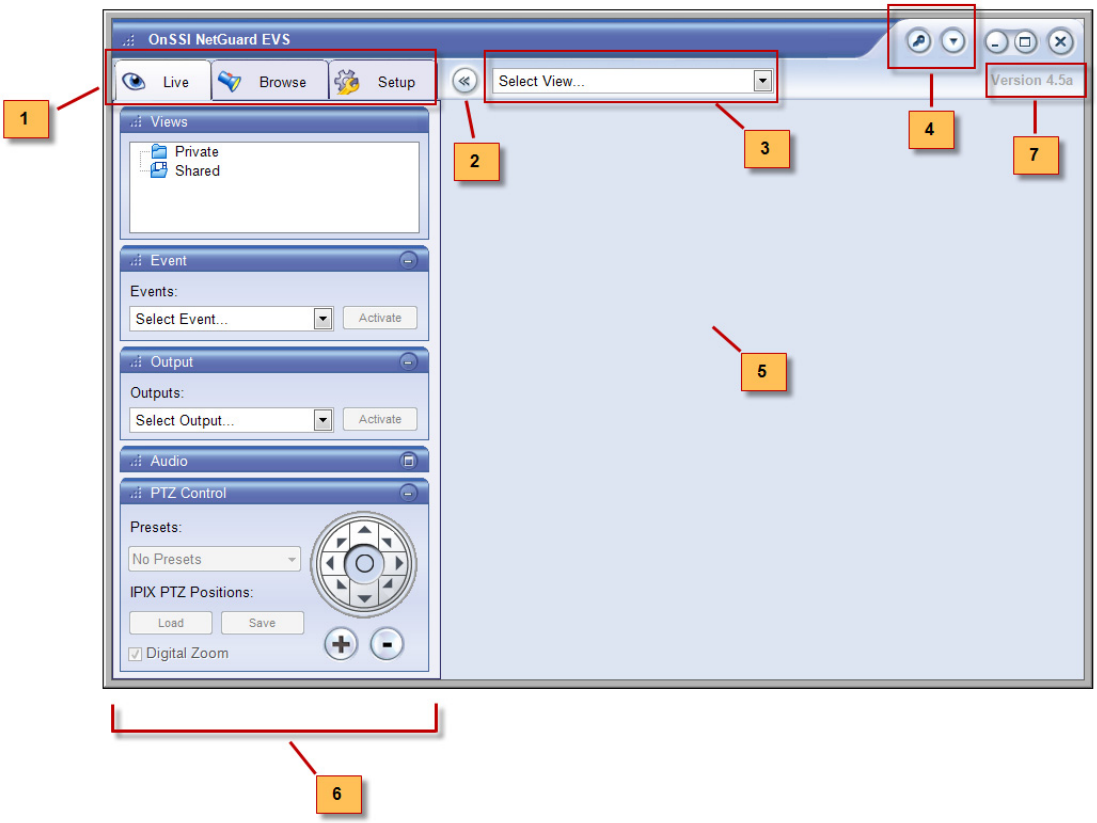


Figure 5 NetGuard EVS Interface

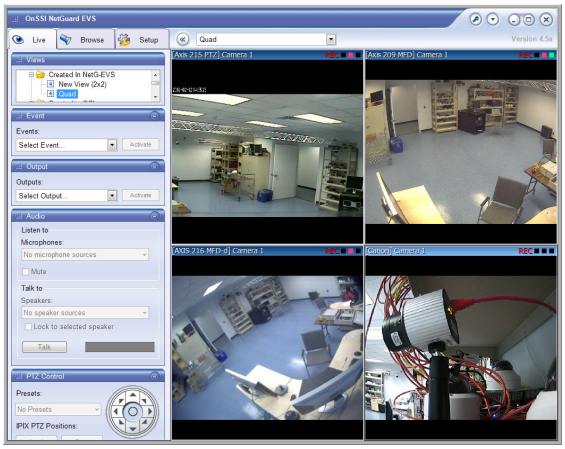
Components of the NetGuard EVS Interface

1	**NetGuard EVS Client Tabs**	These tabs are used to access the three main components of NetGuard EVS: ***Live*** – used to view live video ***Browse*** – used to playback recorded video ***Setup*** - used to configure views
2	**Hide/Show Pane Button**	Click this button to expand or collapse the Function Pane.
3	**View Drop-Down Menu**	This drop-down provides access to an available view from any of the three Client tabs. It provides access to views if the Function Pane is collapsed.
4	**Application Icons**	**Log Out Icon**: This icon will log the user out of NetGuard EVS. **Show Application Menu Icon**: This icon will display a shortcut menu.
5	**Display View Area**	Once configured, this area will display video from the camera(s)
6	**Function Pane**	This collapsible pane displays functions related to the active Client Tab.
7	**Version**	The version of NetGuard EVS is displayed here.

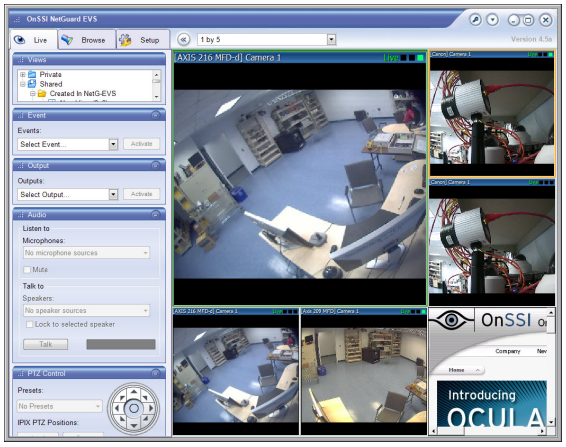
What Is A View?

A view is the fundamental component when observing video. It is a collection of panes or windows that display video output. There are many layout options for the number of panes and their sizes. Users select the best configuration according to the size and quantity of monitors that will display the output.

Sample views:



2 x 2 View



1 x 5 View

2 x 4 View

Too Many!!

Setup Tab

The ***Setup*** tab is used to establish and configure views used in the ***Live*** and ***Browse*** tabs. Access to this tab is granted through ***User Access*** in the *Image Server Administrator*.

System Overview

The **System Overview** section of the ***Setup*** tab lists the output options available for display in a view.

Prior to setting up any Views, ensure camera connectivity by expanding the *Cameras* folder within **System Overview**.

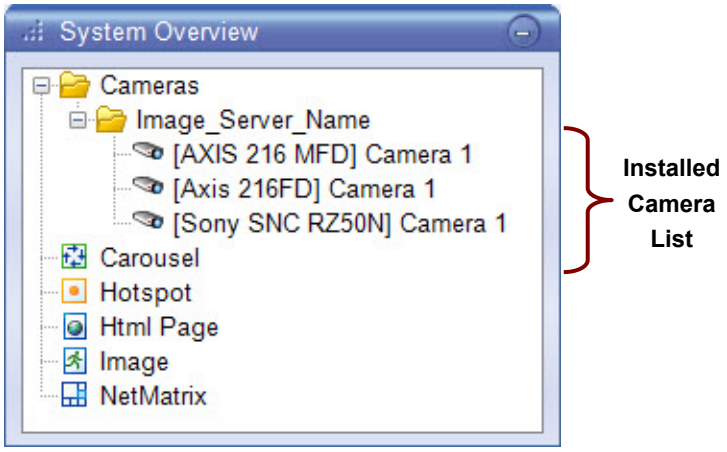


Figure 6 System Overview

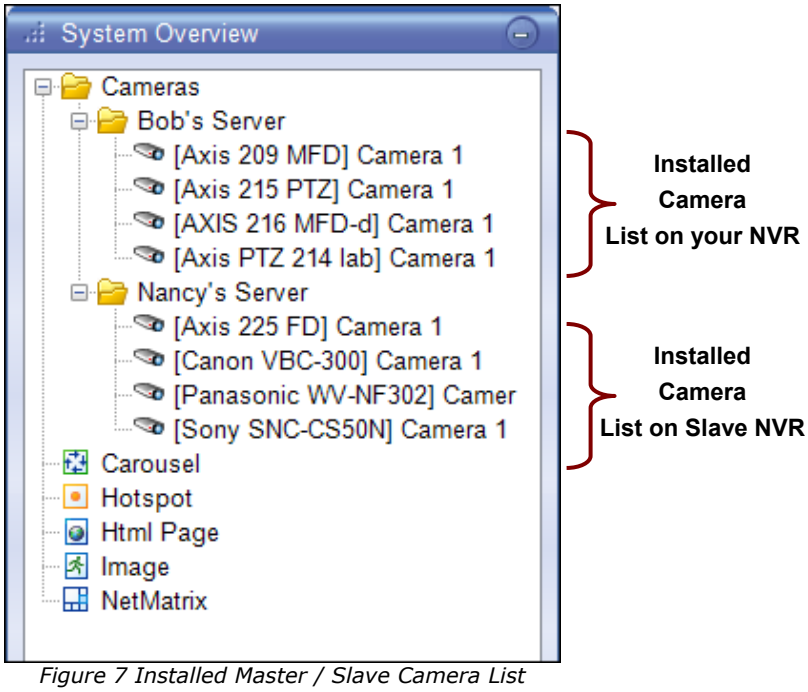


Figure 7 Installed Master / Slave Camera List

Views

The **Views** section of the ***Setup*** tab displays an expandable/collapsible list which represent a hierarchical organization of existing views.

View Types

These are the first level of view organization and represents a collection of *Groups.*

Private vs. Shared

Shared views are those which are available to all users on the system.

A **Private** view is visible only for the user who created it. Users may have any combination of rights to create or view private and shared views.

Groups – This is the second level of view organization.

A **Group** is a collection of views. Groups are defined by the user and may contain one or more views.

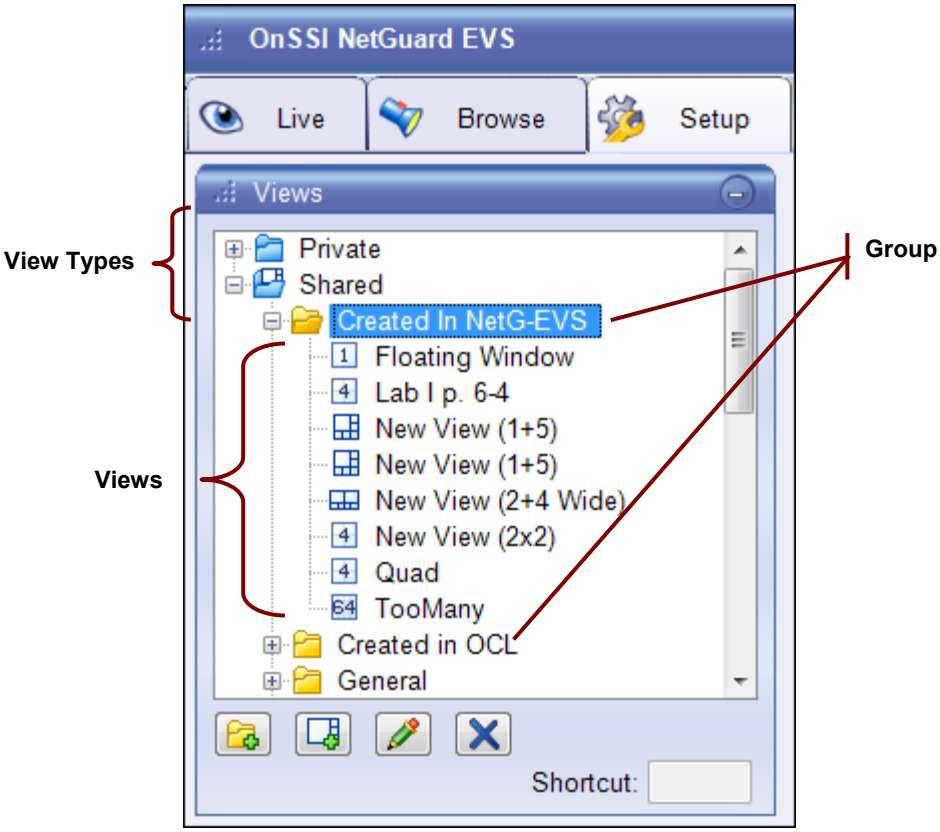


Figure 8 Views Setup

View Options

The following View configuration options are available. The panes are represented by the number within the View window. The icon aids in visualizing the layout of the panes.

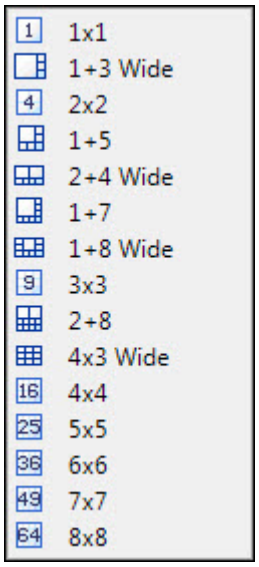


Figure 9 View Options

Create A New View and Add Camera Video

Follow these steps to configure a new view.

1. In the ***Setup*** tab, highlight the **Private** or **Shared** folder based on the desired view access.
2. Create a new group within the selected view by clicking the **Create New Group** icon or right-click and select **New Group**.
3. Enter a descriptive name for the group. Press **[ENTER]**.
4. Create a view for the group by clicking the **Create New View** icon or right-click the group and select **New View**.
   - The menu shown in Figure 9 appears.
5. Select the desired view size.
6. Populate the image boxes with output from devices listed within the *System Overview* section.
   a. Expand the Camera folder in the *System Overview* section.
   b. Expand the *Image Server* folder.
   c. Drag and drop a camera from the list to the desired view box or pane.
   d. Repeat for all panes.
7. Click the ***Live*** tab to view results.

Note:
*To enlarge any view, double-click within the camera view window from the **Live** tab. To restore to the previous size, double-click again.*

Modifying Views

Views may be renamed or deleted. The contents of view panes may also be changed. The view configuration, however, may not be changed. For instance, if you have a 2 x 2 view, you may not change it to a 2 x 8 view. You must create a new view with the new configuration and delete the old one if it is no longer necessary.

To Rename a View:

1. From the ***Setup*** tab, right-click the view to rename and select **Rename** or select the view and click the **Rename** icon .
2. Modify the description of the view and press **[ENTER]**
   - ➲ The view has been renamed.

To Modify View Contents:

The content displayed within a view pane may be changed from one camera to another.

1. From the ***Setup*** tab, click the checkbox in the upper right corner of the pane you wish to modify.
   - ➲ The contents of that pane disappears from the View.

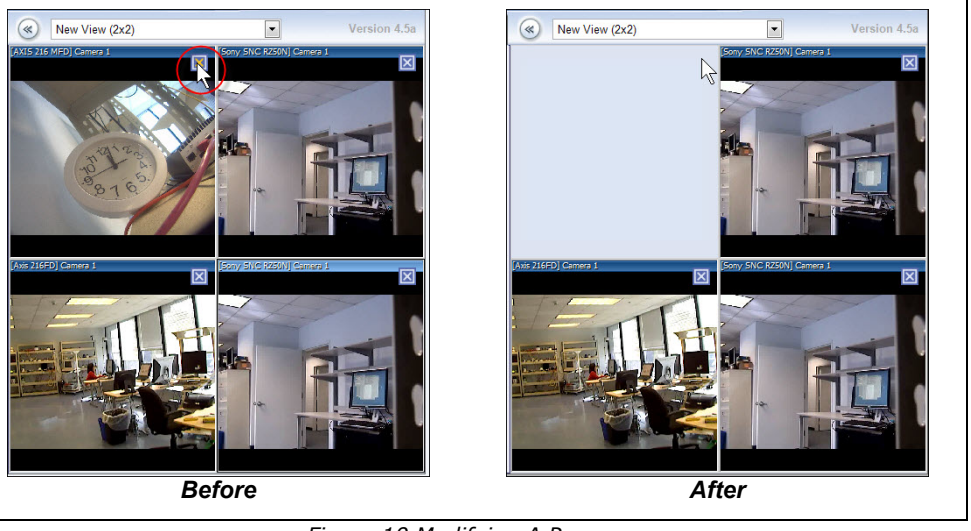


Figure 10 Modifying A Pane

2. Click and drag the desired output to the empty pane.

To Delete a View:

1. From the ***Setup*** tab, right-click the view to delete and select **Delete** or select the view and click the **Delete** icon .
   - ➲ An "*Are you sure you want to delete the view*?" pop-up appears.
2. Click **Yes** to delete the view.
   - ➲ The view has been deleted.

View Window Display Options

Components other than direct video feed from a camera may be displayed within a view pane. These additional options, available in the *System Overview* section of the ***Setup*** tab, include:

- Carousel
- Hotspot
- Html Page
- Image
- NetMatrix

Carousel

A carousel within a view pane will alternate output from camera to camera listed within a single view pane. This feature is often used where there is one large pane surrounded by smaller panes.

> ***Note***:
> *Only video images from cameras may be included in a carousel. HTML pages or graphic images may not.*

To Add A Carousel to a View Pane:

1. In the ***Setup*** tab **Views** section, select the view in which to add the carousel.
2. Drag and drop the item

from the **System Overview** section to the desired view pane.

   ➲ The following dialog box appears:

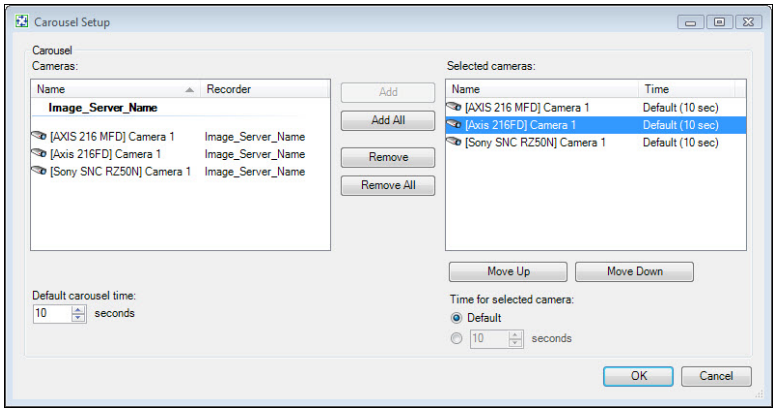


Figure 11 Carousel Setup

3. Select the cameras to be used within the Carousel and click **Add** or click **Add All** to use all cameras and move the camera name(s) to the *Selected Cameras* list.
4. Reorder the cameras within the *Selected Cameras* list to the desired viewing order by using the **Move Up** and **Move Down** buttons.
5. The default time for image transition is 10 seconds from camera to camera (*Default Carousel Time*). If desired, modify the image transition for all cameras.

6. If a specific camera needs to be displayed at a different time interval, select the camera within the *Selected Cameras* list. Change the time for the selected camera.
7. When done, click **OK**.
8. Switch to the ***Live*** tab to view the results.

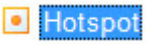
Hotspot

A Hotspot is a view pane dedicated to displaying the image from another view pane when manually selected by the user. To be useful, a hotspot typically is placed in one of the larger view positions. NetGuard EVS supports only one Hotspot per view.

Advantages of Using a Hotspot:
The fact that you can view enlarged video in the hotspot is not in itself what makes the hotspot useful; you can enlarge video from any camera in a view by double-clicking the required camera position.

What makes the hotspot useful is that you can use a low image quality and/or frame rate for cameras in the view's regular positions and a high image quality and/or frame rate for the hot spot. Then, only when users select a camera for viewing in the hotspot will it be displayed in high quality and/or high frame rate. This can significantly help you save bandwidth on the remote connection..

To Add A Hotspot to a View Pane:

1. In the ***Setup*** tab **Views** section, select the view in which to add the Hotspot.
2. Drag and drop the item 

from the **System Overview** section to the desired view pane.
3. Switch to the ***Live*** tab.
4. To populate the Hotspot, click in any view position that is displaying a video image.

HTML Page

An HTML page can also be added to a view pane. Typical examples of these include:

- Company websites
- Online map services
- Link collections
- E-learning pages
- HTML page for accessing a camera or DVR's interface

To Add An HTML Page to a View Pane:

1. In the ***Setup*** tab **Views** section, highlight the view in which to add the HTML page.
2. Drag and drop

from the **System Overview** section to the desired view pane.
   - The following appears:

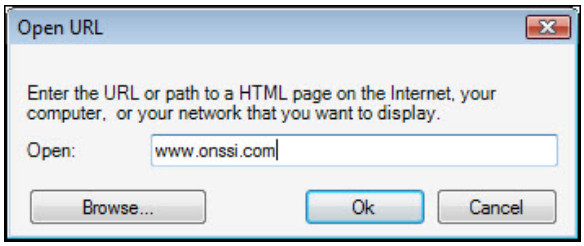

Open URL
Enter the URL or path to a HTML page on the Internet, your computer, or your network that you want to display.
Open:
www.onssi.com
Browse...
Ok
Cancel

Figure 12 Open URL Dialog Box

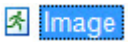
3. Enter the URL and click **OK**.

   ➲ The webpage appears in the view pane.

Image

Adding a static image to a view pane may also be desired for a variety of reasons such as: Company logos, floor plans, maps, wanted photos, etc.

To Add An Image to a View Pane:

1. In the ***Setup*** tab **Views** section, select the view in which to add the image.
2. Drag and drop the item 

from the **System Overview** section to the desired view pane.

   ➲ The standard Windows browse dialog appears.

3. Search for and select the image file and click **Open**.

   ➲ The image appears in the view pane.

Properties

The **Properties** section within the ***Setup*** tab is dynamic based upon the selected view pane.

Properties for Video

1. In the ***Setup*** tab, click a pane displaying video.

   ➲ The **Properties** section for the camera image displays the following:

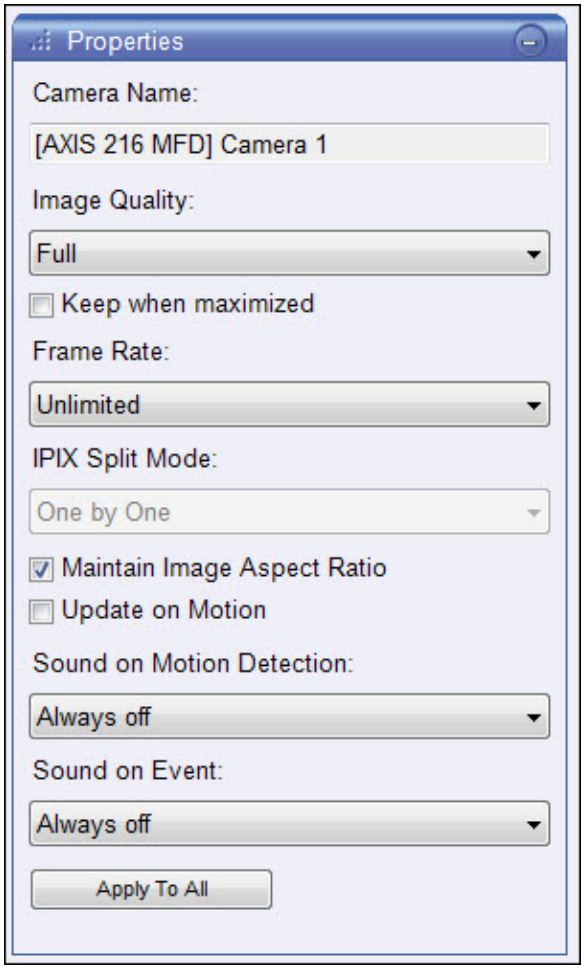


Figure 13 Camera Properties

Image Quality – Choices are: Full, Superhigh, High, Medium, Low

This setting applies to live as well as recorded video. To save on bandwidth lower the image quality, the video from the selected camera is re-encoded to a JPEG format on the surveillance system server before being sent to the client (NetGuard EVS or Ocularis Client Lite).

Image Quality set to **Full**, the default, provides full quality of the original video. **Low** re-encodes the image to an output width of 160 pixels and a JPEG quality level of 20%.

Keep when maximized - When checked, if the image is maximized via double-click, the image quality will maintain the setting found in *Image Quality*. The default is to display the larger windows in full quality video.

Frame rate – this is the frame rate for the camera while viewed in NetGuard EVS. Options are: Unlimited (default), Medium or Low. Save bandwidth by selecting Medium or Low.

IPIX Split Mode – For IPIX cameras only (wide angle 360 degree panoramic images), you can select:

- *One by One* to view a single viewpoint
- *Two by Two* to view four different viewpoints at a time

Maintain Image Aspect Ratio – When unchecked, the video will be stretched to fit the window pane and may appear slightly distorted. When unchecked, the original aspect ratio will be maintained but you may notice black vertical or horizontal bars around the video.

Update on Motion – If checked, the video from this camera will only be updated on the ***Live*** tab when motion is detected. Otherwise the text "No motion" will display. This option can be used to reduce CPU usage.

Sound on Motion Detection and Sound on Event – plays a sound (from a .wav file) when motion is detect or an event occurs while viewing video in the ***Live*** tab.

Apply to All – Click this button to set all applicable settings for all cameras in the view.

Other Properties

You can modify parameters for non-video panes as well. Click the pane, for instance, displaying the webpage:

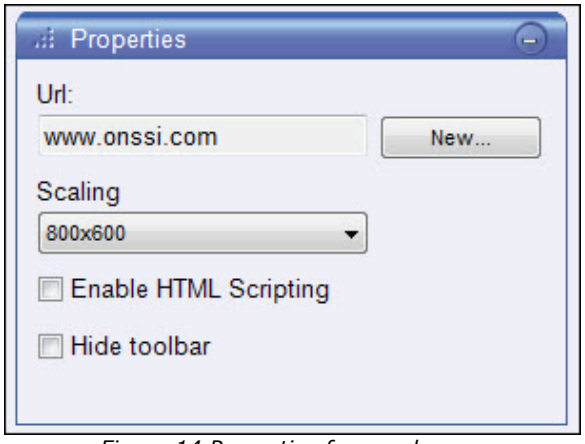


Figure 14 Properties for a web page

Live Tab

Using the Views You Just Created

Now that NetGuard EVS is populated with a selection of views, we will continue to explore the options when viewing live video.

The benefit of IP-based digital surveillance software is that recording all video is not necessary. Video is typically recorded when there is motion within the camera field of view or when an event is triggered automatically or manually. Events are configured in the NVR software administration module. Targeted recording frees security personnel and operators from having to view endless amounts of video recording. This option is configured in the NVR administration application.

***Note**:*
Live video is not necessarily recorded video.

Image Bar

The top portion of the image pane is called the ***Image Bar***. The recording status of video output is located in the rightmost corner of the image bar.

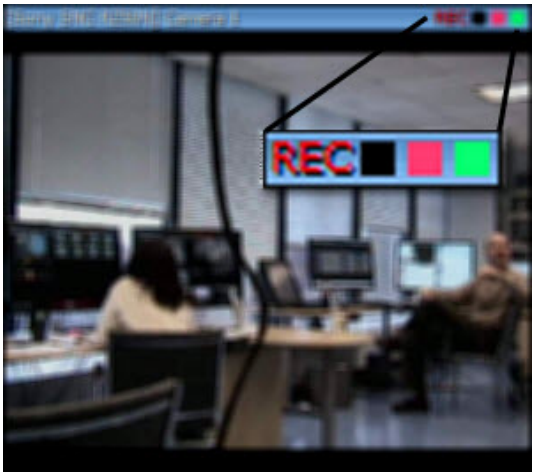


Figure 15 Viewing Live Video

Image Bar indicators are defined as follows:

Recording Status

The recording status options are:

REC – this indicates that the video is being recorded.

Stopped – this indicates that the video stream has stopped.

Live – this means that the displayed video is live but not being recorded.

Recording Status Icons

To the right of the recording status, are three square icons which indicate the following:

1. **Event Indicator**: The first square alternates between black and yellow. Yellow indicates that an event has occurred on that camera. Click anywhere inside the image to reset the Event Indicator. Events are configured in the NVR Administrator module. An example of an event is: a window was opened (contact disconnect), a camera was tampered with, an access card was swiped in an access, etc.
2. **Motion Indicator**: The second (center) square alternates between black and red. Red indicates that motion has taken place within that camera's field of view. Click anywhere inside the image to reset the Motion Indicator. If it becomes red again, motion has occurred since you last turned it off.

> ***Note**:*
> *The Red icon is used to ascertain if motion occurred on a camera particularly if the operator has left his station or otherwise was not watching the monitor.*

3. **Online Indicator**: The third square alternates between black and green. Blinking green indicates a live video feed.

Live Tab Function Pane

The following sections are found in the Function Pane of the ***Live*** Tab.

Views	This section enables you to see available views and switch between them.
Event	This section allows you to manually trigger an event. This will be discussed in more depth later in the Event Buttons section.
Output	This section allows you to manually trigger an output event and will be discussed in more detail later.
Audio	For cameras with supporting audio, this section allows you to control microphones to listen to as well as the ability to speak to the devices speakers
PTZ Control	This section allows you to control PTZ cameras as well as zoom levels for all cameras.

Views

Available views are displayed in the expandable/collapsible view tree.

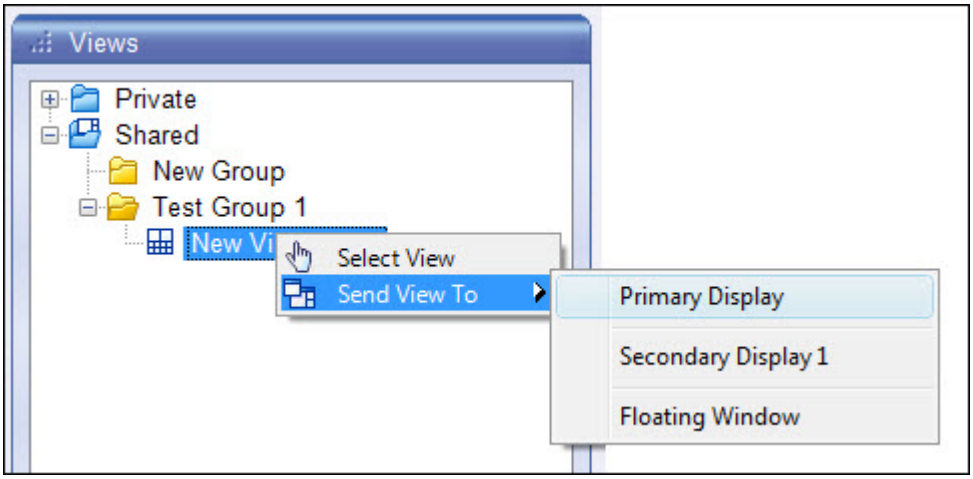


Figure 16 Send Views to Displays

A right-click menu is available for views and defined as follows:

Primary Display	In the event there are multiple displays or monitors, the view will be maximized in what is considered the main or primary monitor.
Secondary Display	In the event there are multiple displays or monitors, the view will be maximized in what is considered the secondary or #2 monitor.
Floating Window	The view will be opened in a separate window.

Audio

For supported cameras, you can select the microphone(s) to listen to in addition to the Live video stream. For cameras with speakers, you can connect to the camera's speaker and talk into the speaker so that you may be heard by those in the camera's general area.

Using PTZ

There are many ways in which to control PTZ Cameras when viewing live video:

- Point-and-Click in the pane to pan the image
- Scroll with the mouse wheel to zoom the image in and out
- Navigation buttons (located in the PTZ Control section) to pan and zoom
- Joystick to pan and zoom
- Presets
- Automated Patrolling

PTZ Control

For PTZ and non-PTZ Cameras there are two types of zoom options:

Optical – this is where a camera's lens physically moves to provide the required angle of view with no loss of quality. Obtain optical zoom on supported cameras by deselecting the *Digital Zoom* checkbox.

Digital – this is where the image itself is enlarged by cropping the image and resizing it back to the pixel size of the original image (interpolation). Digital zoom simulates optical zoom but the digitally zoomed portion will have a lower quality than the original image.

PTZ Presets

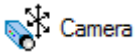
PTZ Presets are camera positions which are saved and assigned a descriptive name. Presets are useful in positioning the camera to particular areas of interest such as a doorway, cash register, safe, reception desk, window, etc. Each PTZ camera has a default preset of "Home". This "Home" position behaves like any user defined preset.

PTZ Presets are configured within the NVR software. Once a preset is set on a camera from NetDVMS or other NVR application, it is available through any of OnSSI client applications (NetGuard, NetGuard EVS, Ocularis Client Lite).

The camera's angle and zoom level are saved within the preset. You can access the position in a single-step from the ***Live*** tab.

To Set PTZ Presets from NetDVMS Administrator

1. Open NetDVMS *Administrator*.
2. Click **Service Manager** button.
3. Click **Pause**. The *Recording Server* may not be running in order to PTZ Presets.
4. Select the PTZ Camera for which to configure PTZ Presets.

   Hint: the NVR *Device Manager* will display a PTZ camera with the icon: 

5. Click **Settings**.

   ➲ The *Camera Settings for [Device_name] Camera Name* appears. The **PTZ Preset Positions** button should be enabled.

6. Click the **PTZ Preset Positions** button.

   ➲ The following appears:

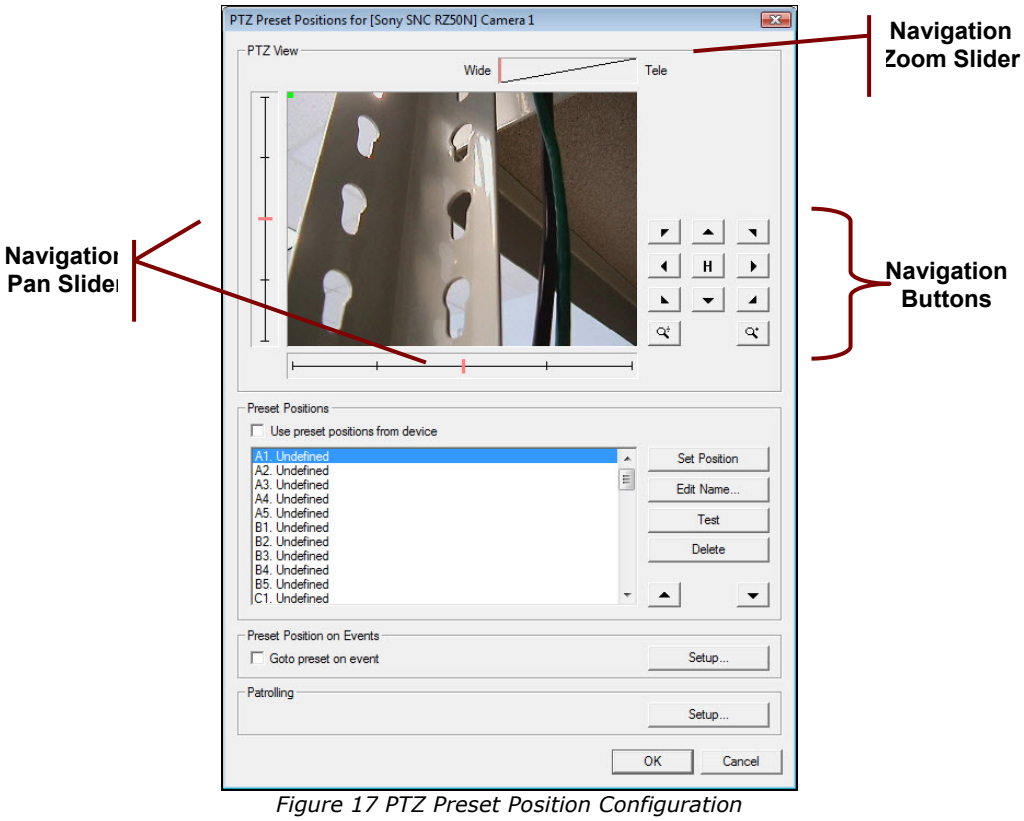


Figure 17 PTZ Preset Position Configuration

7. Use the navigation buttons, pan sliders or zoom slider bars to establish the first camera position. Don't forget to consider the zoom level.

8. Select an *Undefined* slot and click the **Set Position** button.
   - ➲ A prompt appears asking you to enter a descriptive name.
9. Enter the descriptive name and click **OK**.
   - ➲ The list of positions is updated with your new preset.
10. Repeat for all desired presets.
11. Click **OK** when done.
12. Click **OK** in the *Camera Settings for [Device_name] Camera Name* dialog box.
13. Click **Service Manager** and **Resume**.
14. Click **Exit** from NetDVMS *Administrator*.

To Use PTZ Presets in NetGuard EVS

1. Open NetGuard EVS.
2. In the ***Live*** tab, click the camera pane with the presets.
3. Do either of the following:
   a. In the **PTZ Control** section of the Function Pane, choose the defined preset from the *Presets* drop-down menu.
   b. Right-click on the image in the pane and select: **PTZ Presets**… **<Preset Name>**

Patrolling

With PTZ cameras, you can have them automatically move from preset position to preset position. This called "*Patrolling*". PTZ Patrolling is configured within the NVR software. Once patrolling is set on a camera from NetDVMS or other NVR application, it is available through any of OnSSI client applications (NetGuard, NetGuard EVS, Ocularis Client Lite).

- To use patrolling, you must have at least two presets configured.
- Multiple patrolling schemes are supported. This is useful in the case where you want to monitor one set of areas during business hours and another set after hours.
- Patrolling can be scheduled as a matter of standard routine or it can be set to trigger when a preconfigured event occurs.
- A PTZ camera can be configured to return to its "Home" preset position upon completion of a patrol.

To Set A Patrol Scheme from NetDVMS

1. If not already done, set at least two preset positions for the camera. See *To Set PTZ Presets* on page 3-17.
2. Open NetDVMS *Administrator*.
3. Click the **Service Manager** button.
4. Click **Pause**. The *Recording Server* must not be running when configuring PTZ Presets.

5. Select the PTZ Camera for which to configure PTZ Patrolling.
6. Click **Settings**.
   - ➲ The *Camera Settings for [Device_name] Camera Name* appears. The **PTZ Preset Positions** button should be enabled.
7. Click the **PTZ Preset Positions** button.
   - ➲ The dialog box in Figure 17 appears.
8. Click the **Setup** button in the section labeled "*Patrolling*".
   - ➲ The ***Setup PTZ Patrolling window*** appears.

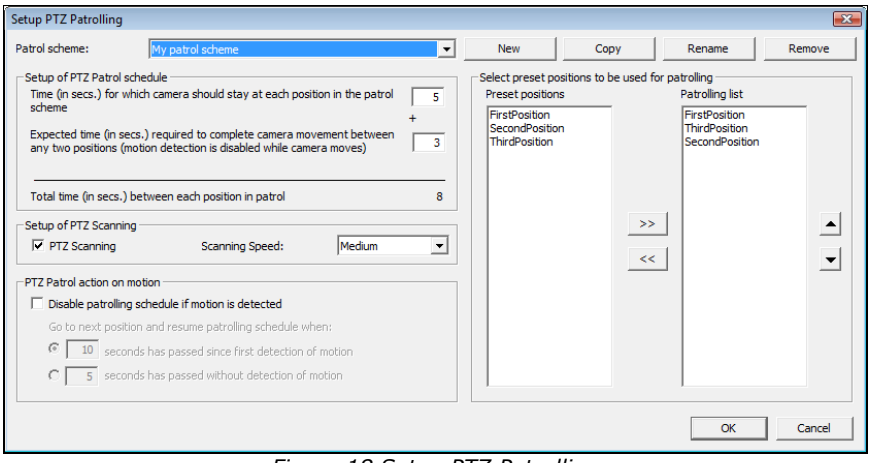


Figure 18 Setup PTZ Patrolling

9. Establish a descriptive name for the Patrol scheme.
   a. To use the default name, "My patrol scheme", you need not do anything.
   b. To change the name, click the **Rename** button and update the Patrol Scheme name.
10. Set the time in seconds for which the camera:
    a. Should stay at each position in the patrol scheme
    b. Is expected to move between positions
11. PTZ Scanning is supported by some cameras and displays smooth motion video when the camera is moving from preset to preset position. Click the *PTZ Scanning* checkbox to enable this feature.
12. Disabling the patrol schedule may be done if motion is detected to allow for recording and analysis by clicking the *Disable patrolling schedule if motion is detected* checkbox.
13. Preset positions need to be added to the Patrolling List. Use the move right >> button to move the selected presets to the Patrolling list. Use the move up ▲ and move down ▼ buttons to control the order of the patrolling in the Patrolling list.
14. To set an additional Patrol scheme, click the **New** button and repeat steps 9 – 13.
15. When finished, click **OK** in the **Setup PTZ Patrolling** window.

16. Click **OK** in the *PTZ Preset Positions for <camera_name>* window.
17. Click **OK** in the *Camera Settings for [Device_name] Camera Name* window.
    - ➲ Patrolling must be now be scheduled
18. Click the **Scheduler** button from NetDVMS Administrator in order to enable patrolling.
19. Select the PTZ Camera with the patrol scheme from the *Camera* drop-down menu.
20. Verify the desired Patrol Scheme in the *Patrol Scheme* drop-down menu.
21. Click the *Patrolling* checkbox.
22. Highlight the days and times by which this patrol scheme should be enabled.
23. Repeat steps 19-22 for each patrol scheme.
24. Click **Exit**.
25. Click **Service Manager**.
26. Click **Resume** to resume the *Recording Server*.
27. Click **Exit** from NetDVMS Administrator.

To View the PTZ Patrol in NetGuard EVS

1. Launch NetGuard EVS.
    - ➲ In the ***Live*** tab, you should see the configured camera output alternate between each preset.
2. You can access a preset position directly by selecting it from the *Preset* drop-down within the **PTZ Control** section of the Function Pane.

To Stop PTZ Patrolling in NetGuard EVS

In the event that you wish to pause the patrolling schedule of a camera:

1. From the ***Live*** tab in NetGuard EVS, right-click in the view pane for the patrolling camera.
2. Select **PTZ Presets**
3. Click **Stop PTZ Patrolling**.

Browse Tab

The center tab in NetGuard EVS is the ***Browse*** tab. This tab is used to view recorded video stored locally. When clicked, it will display recorded images from the cameras in the selected view.

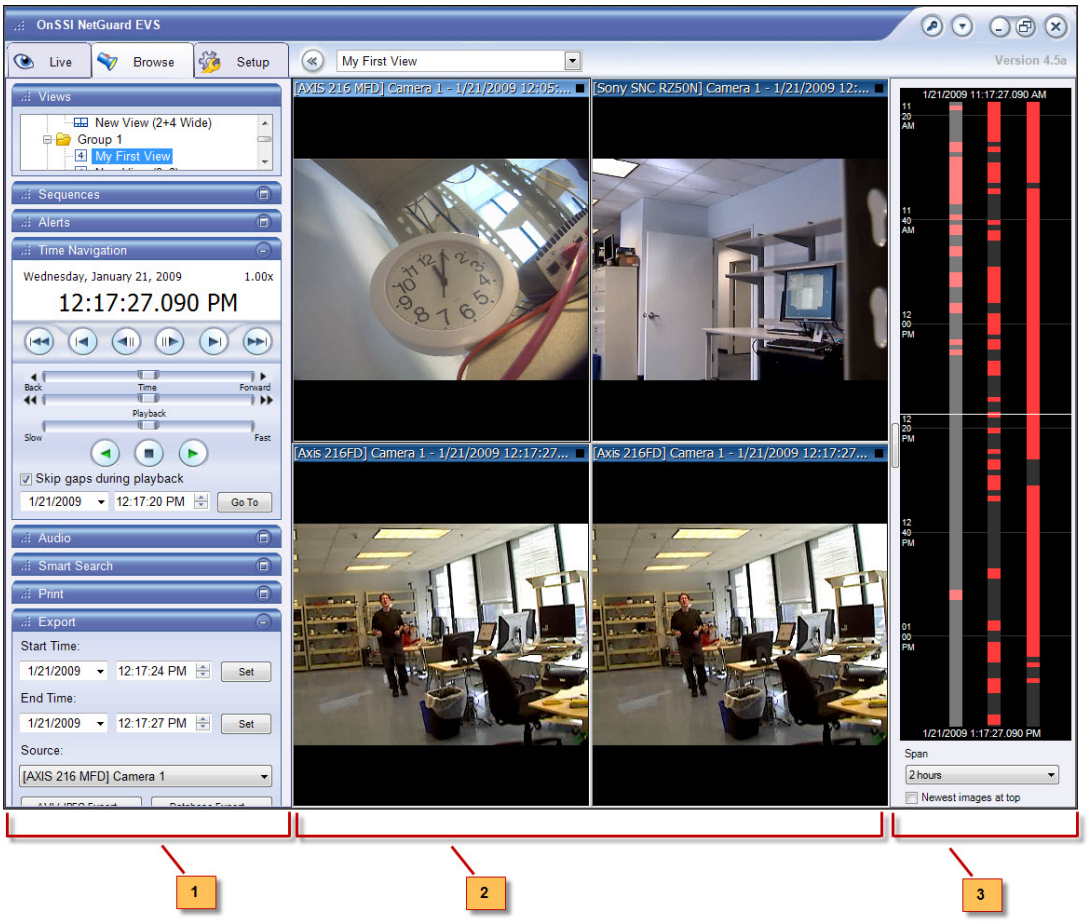


Figure 19 Browse Interface

Components of the NetGuard EVS Browse Tab

The ***Browse*** tab contains the following sections:

1	**Function Pane**	This collapsible pane displays functions related to the active view.
2	**Display View Area**	This area displays the selected View.
3	**Timeline Browser**	This area displays an overview of periods with recordings from all cameras displayed in the current view.

The Function Pane in the ***Browse*** tab contains the following sections:

- Views
- Sequences
- Alerts
- Time Navigation
- Audio
- PTZ Control
- Smart Search
- Print
- Export

Recorded Video Playback

Within the ***Browse*** tab, there are several functions available to view video recordings:

- Time Navigation
- Smart Search
- Alerts
- Sequences
- Timeline Browser

Time Navigation

The **Time Navigation** section within the Function Pane is used to playback recorded video.

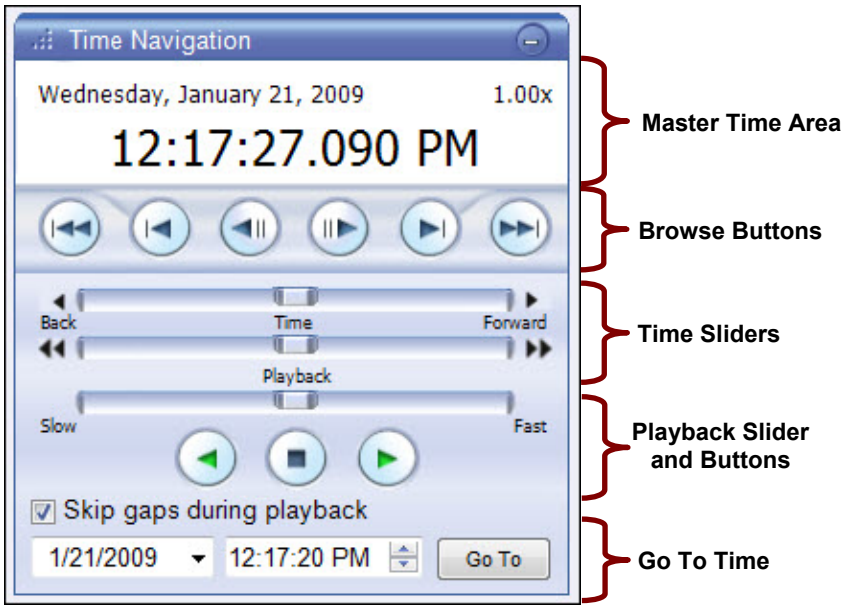


Figure 20 Time Navigation

Components within **Time Navigation** include:

Master Time Area	Shows the master time and date of the displayed recordings. All images in the view will be synchronized to this point in time.[†] The playback speed is also displayed.
Browse Buttons	Six buttons allow you to manually navigate through recordings from the selected camera. Use the tool tip to help identify the button's behavior.
Time Sliders	Click and drag these sliders to browse recordings
Playback Slider and Buttons	The Playback Slider determines the playback speed. The Playback Buttons allow you to play the recording forwards or backwards or to stop the playback.
Go To Time	Allows you to jump to a specific point in time.

Audio Playback

Playback of recorded audio is the same as playback of live audio. In the **Audio** section of the ***Browse*** tab select the Microphone(s) to listen to while viewing recorded video as described in the previous **Time Navigation** section.

[†] Some cameras may only record during motion detection. Also, there may be no recorded images from one or more cameras in the View matching the specified point in time. If this is the case, the last image in the camera's database prior to the specified point in time will be displayed in the view.

> ***Note**:*
> *The **Talk to Speakers** function is disabled because outgoing audio is not recorded.*

PTZ Control

Controlling recorded video from a PTZ camera is limited to digital zoom. The zoom functions work the same in the ***Browse*** tab as they do in the ***Live*** tab.

Timeline Browser

The **Timeline Browser** is another way to view recorded video from within the ***Browse*** tab.

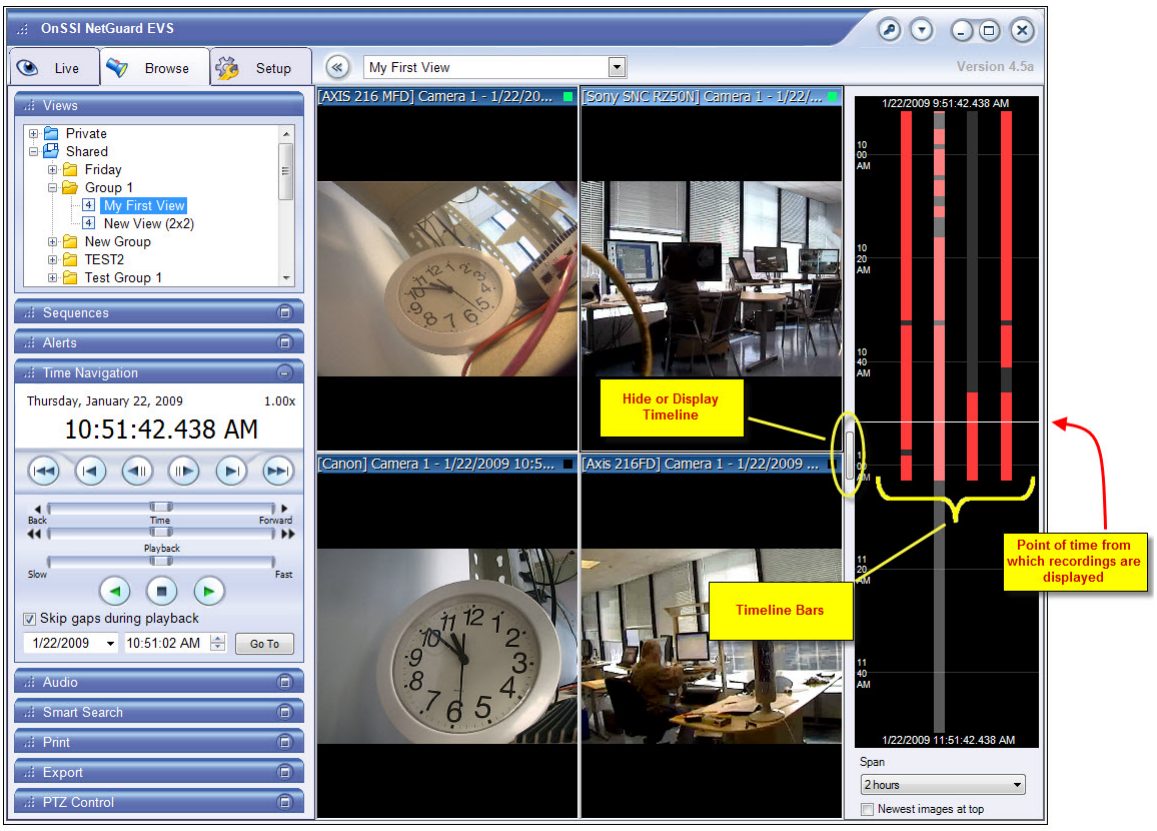


Figure 21 Timeline Browser

Timeline bars – Each bar represents a camera. In the example shown in Figure 21, there are four cameras in the view.

- The bar with the lighter shade represents the selected pane or camera.
- Red indicates recording with motion
- Green indicates recording without motion (not shown)

Using the Timeline Browser

The recordings may be advanced or reversed by using the following methods:

- Click and drag with the mouse on top of the timelines to move the timeline forward or backward
- Use **[CTRL]** click and drag to move the timeline slowly
- Click on the *Timeline Browser* and use the scroll wheel of the mouse
- Double-click on a point on the timeline to jump to that time

Timeline Browser Options

Located at the bottom of the Timelines, the *Span* drop-down menu allows you control of the amount of video to display in the time span. (1 hour, 2 hours, 4 hours, 6 hours, 8 hours, 12 hours, 1 day)

- Under *Span*, you can specify the order of the recordings by clicking the *Newest images at top* checkbox.

Smart Search

Lets you search for motion in one or more specified areas of a selected camera's recordings.

1. In the ***Browse*** tab, select the pane for the camera you wish to investigate. In fact, it will be easier if you maximize the window by double-clicking the image within it.
2. Expand the **Smart Search** section of the ***Browse*** tab.
3. Select the *Show Grid* checkbox.

   ➲ The entire image is covered with a blue grid.
4. Click and drag over the area of the image in which you would like to search.
5. Select the radio button for **Include** or **Exclude**.
6. Click **Save**.

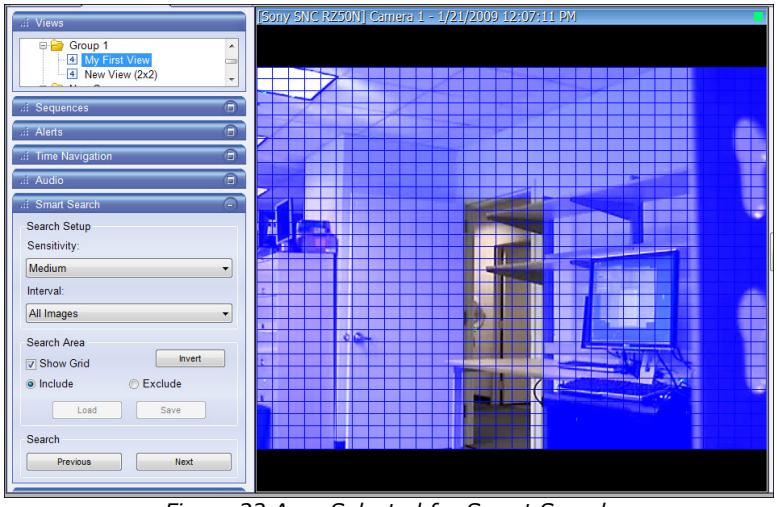


Figure 22 Area Selected for Smart Search

➲ The application will search for motion in the non-blue area of the image.

7. Select the **Smart Search** parameters:
   - **Sensitivity** – Very High, High, Medium Low, or Very Low
   - **Interval** – All Images, 1, 2, 5, or 10 seconds
8. Click either the **Next** or **Previous** button (to search forward or backwards respectively).

➲ The Smart Search progress window appears.

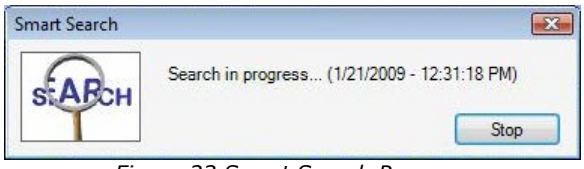


Figure 23 Smart Search Progress

9. When motion in the designated area of the image is detected the search will stop and the moving objected highlighted. The date and timestamp is provided, allowing you to investigate further.

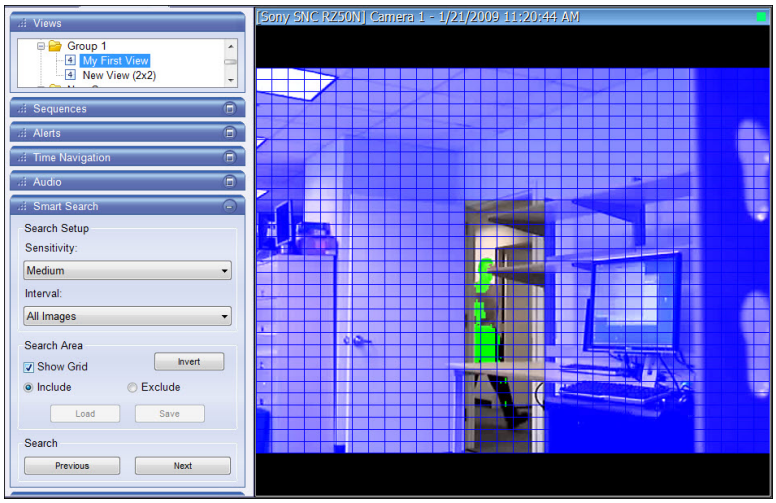


Figure 24 Smart Search Motion Detected

10. Continue to click **Next** or **Previous** to see subsequent moving objects.
11. Turn off *Show Grid* under **Smart Search** and use the **Time Navigation** function (if necessary) to explore this incident.

Alerts

The **Alerts** section of the ***Browse*** tab allows you to view a list of detected events. Events, as discussed previously, are specific incidents you can configure to trigger automatically or manually. The events listed in the Alerts section of the Function Pane may be clicked allowing you to quickly jump to the time at which the event occurred.

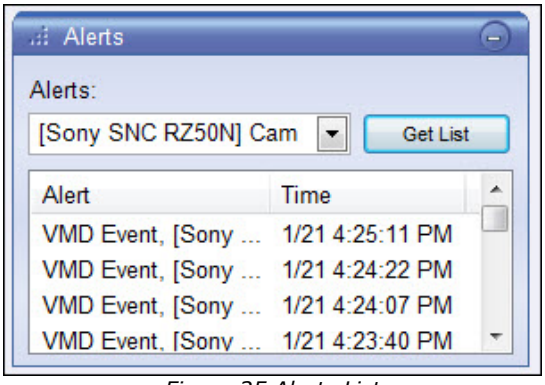


Figure 25 Alerts List

To View Recorded Video by Events:

1. In the **Alerts** section of the ***Browse*** tab, select the desired camera from the *Alerts* drop-down menu.
2. Click the **Get List** button.
   - ➲ Events for that camera will be listed.
3. Select the event and the View will change all panes to that date/time.
4. Use **Time Navigation** to view the video.

Sequences

In most cases to maximize storage efficiency, video is recorded only when there is motion. Each segment of video is recorded into a "sequence". The **Sequences** section of the ***Browse*** tab allows you to view a list of recorded sequences for the selected camera. Then, you can preview each sequence according to date and time.

To View Recorded Video by Recorded Sequence:

1. In the ***Browse*** tab, select the desired camera from the View.
2. In the **Sequences** section of the ***Browse*** tab, click the **Get Sequences** button.
   - ➲ Available sequences for that camera are displayed.

   Each sequence will be listed with date, time and length

   A total of 40 sequences will be displayed: 20 prior to the timestamp displayed in the View and 20 sequences after the timestamp displayed in the view.

   Use the expand icon ⊞ to view the stamp for start, alarm and end.
3. Select the sequence to view.

a. If the *Preview* checkbox is checked, a small preview window will play the video.

b. Otherwise, use **Time Navigation** to play and view the video clip.

4. Click the expand icon next to a sequence to show first, last and alarm image with date and timestamp.

Recorded Video Output

Beyond simply viewing recorded video, it can also be exported in printed or electronic format. The following options are available for output:

- **Print** – to output hard copy reports
- **Export** – to output video or images electronically

Print

Certain incidents may trigger the need to capture the image of the event in a report form. This can be done via the **Print** section of the ***Browse*** tab.

To Print an Image for an Evidence Report:

1. In the ***Browse*** tab, select the pane with the desired image. Use **Time Navigation** or other method to obtain the desired image.
2. Expand the **Print** section of the Function Pane and click the **Print** button.

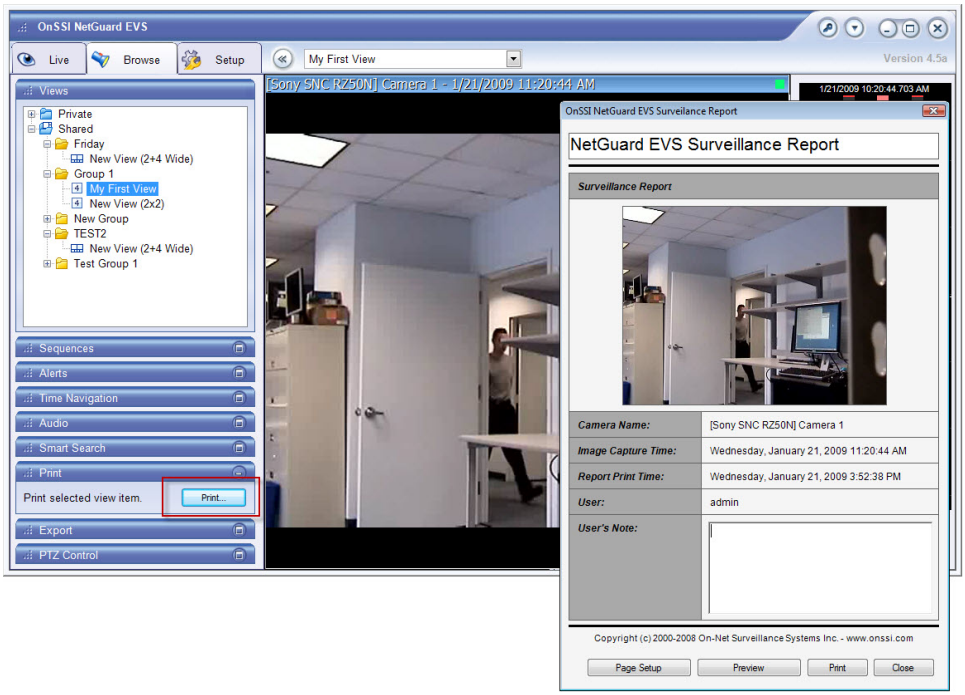


Figure 26 Printing Evidence

3. **Print Fields**:
    a. **Title** – The default title “NetGuard EVS Surveillance Report” may be edited as needed.
    b. The application will capture the:
        i. **Camera Name**
        ii. **Image Capture Time**
        iii. **Report Print Time**
        iv. **User who generated the report**
    c. **User’s Note**: Enter any important information regarding this evidence or incident.
4. **Print Options**:
    a. **Page Setup** – this is a standard form allowing you to change the Paper Size, Source, Orientation and Margins.
    b. **Preview** – will display the report as it will appear on the printed page and indicate the quantity of pages
    c. **Print** – will send the report to the printer
    d. **Close** – closes the Report. Changes are NOT saved.

***Note**:*
If your system contains the driver, you may choose to print to Adobe PDF and save the report as a PDF file.

Export

Exporting video or still images is used for many reasons such as reporting incidents or providing evidence. There are two (2) primary types of exports:

1. AVI/JPEG Export
2. Database Export

AVI/JPEG

The AVI/JPEG export allows you to select a video clip and export it using standard file types.

AVI – The exported video file will be in .avi file format. Only video from one camera can be exported at a time.

JPEG – The exported video file will be parsed and saved in multiple JPEG images.

Database Export

The Database Export will save the video clip in OnSSI proprietary video database format specific to NetGuard EVS and the *NVR Viewer*. Video from multiple cameras may be exported in a single step.

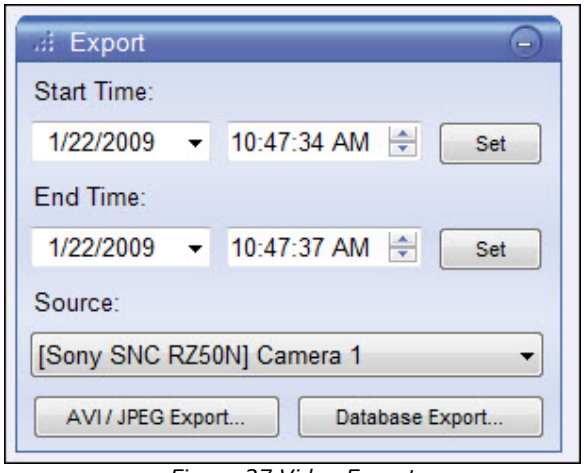


Figure 27 Video Export

Setting the Export Times

In NetGuard EVS there are two methods for selecting the time to start and stop the video clip to be exported.

Manual – If you know exact the start date and time for your exported video clip you may enter the values directly into the Export section of the Function Pane (as shown in Figure 27).

Time Navigation – You can use the **Time Navigation** section of the Function Pane to assist you with setting the start and stop times for the clip.

1. Open **Time Navigation** and use the Playback and other functions you learned earlier in this section to determine the starting point of the clip.

2. Once the starting point is located, in the **Export** section of the Function Pane, click the Start Time **Set** button.
3. Go back to **Time Navigation** and use the Playback and other functions you learned earlier in this section to determine the ending point of the clip.
4. Once the starting point is located, in the **Export** section of the Function Pane, click the End Time **Set** button.

Exporting Video to .AVI

Exporting a video clip to .avi format is useful because as a standard file type, the clip can be viewed by anyone using a supported application such as Windows Media Player.

1. In the ***Browse*** tab, select the View containing the desired video clip.
2. Select the camera which contains the clip by either selecting it from the *Source* drop-down menu in the **Export** section or clicking on the camera's pane in the view.
3. Set the *Start Time* and *End Time* for the clip. See *Setting the Export Times* on page 1-1 for more information.
4. Click the **AVI/JPEG Export** button.

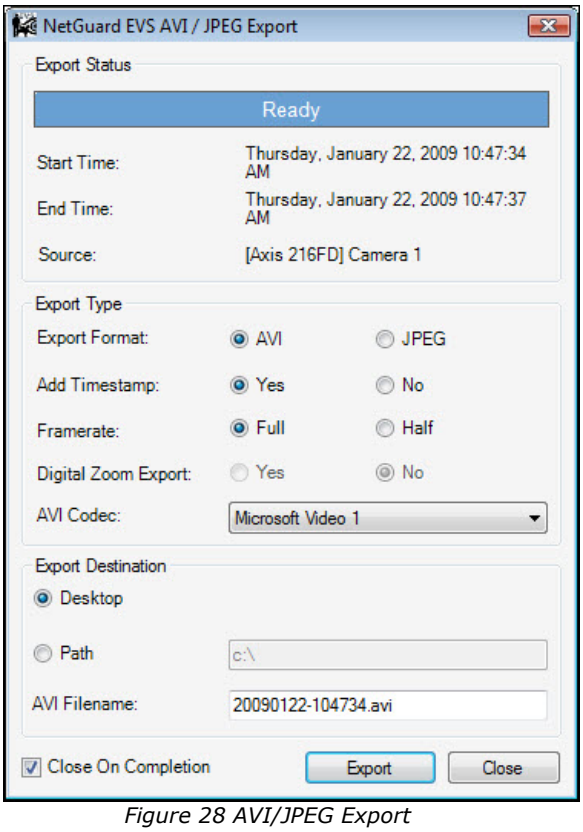


Figure 28 AVI/JPEG Export

The fields within the pop-up can be defined as follows:

Export Status	
Start Time	Read-only display of selected Start Date and Time
End Time	Read-only display of selected End Date and Time
Source	Read-only display of selected source (camera)
Export Type	
Export Format	Choose AVI or JPEG
Add Timestamp	A date and time stamp will be included in the video and visible upon playback
Framerate	Applies only to video: Full will include all images and Half will include every other image (yet play back in real time).
Digital Zoom Export	If the original clip included Digital Zoom you have the option to include it in the export. Otherwise, this option will be disabled.
AVI Codec	For AVI only, you have the option to select the codec used for conversion/compression. Some compressions favor quality and others favor file size.
Export Destination	
Desktop	Select this radio button to save the file to the Desktop in the folder “Exported Images”
Path	Select this radio button to specify where the “Exported Images” folder should be located
AVI Filename	The name of the exported .avi file. The default filename uses the following convention taken from the starting time: YYYYMMDD-HHMMSS
Close On Completion	If you click this checkbox, the NetGuard EVS AVI/JPEG Export dialog box will automatically close when the export is done.

5. AVI is the default file format. Select the following:
   - Whether to include a timestamp in the output (*Add Timestamp*)
   - Location to store the exported file(s) (*Export Destination*)
   - Whether to *Close On Completion*
6. Click **Export**.
   - ➲ An Export status bar will display showing the progress of the export.
7. When the export is complete, access the .avi files in the Exported Images folder in the location specified.
   - ➲ The file is available for view or distribution. Double-click to view the file, attach it to an email, copy it to a CD or other media, etc.

Export Video to JPEG

Exporting a video clip to .jpg format is useful in that as a standard file type and the images can be viewed by anyone using a supported application such as Windows Internet Explorer. However, the video clip is parsed and each frame is saved as a .jpg still image so the output is not actual video. The output is a collection of still images.

1. In the ***Browse*** tab, select the View containing the desired video clip.
2. Select the camera which contains the clip by either selecting it from the *Source* drop-down menu in the **Export** section or clicking on the camera's pane in the view.
3. Set the *Start Time* and *End Time* for the clip. See *Setting the Export Times* on page 3-31 for more information.
4. Click the **AVI/JPEG Export** button.
5. **AVI** is the default file format. Select the following:
    a. Click the **JPEG** radio button.
    b. Whether to include a timestamp in the output (*Add Timestamp*)
    c. Location to store the exported file(s) (*Export Destination*)
    d. Whether to *Close On Completion*
6. Click **Export**.
    ➲ An Export status bar will display showing the progress of the export.
7. When the export is complete, access the .jpg files in the Exported Images folder in the location specified.

1. The files are available for view or distribution.

8. Double-click to view a file, attach to an email, copy to a CD or other media, etc.

Export Video to Database

Exporting video clips to OnSSI database format has several benefits:

- Support for password protection – this prevents unwanted viewers from seeing the video
- Ability to view the clip using an OnSSI *Viewer*, a more robust viewing application than Windows Media Player

1. In the ***Browse*** tab, select the View containing the desired video clip.
2. Select the camera which contains the clip by either selecting it from the *Source* drop-down menu in the **Export** section or clicking on the camera's pane in the view.
3. Set the *Start Time* and *End Time* for the clip. See *Setting the Export Times* on page 3-31 for more information.
4. Click the **Database Export** button.

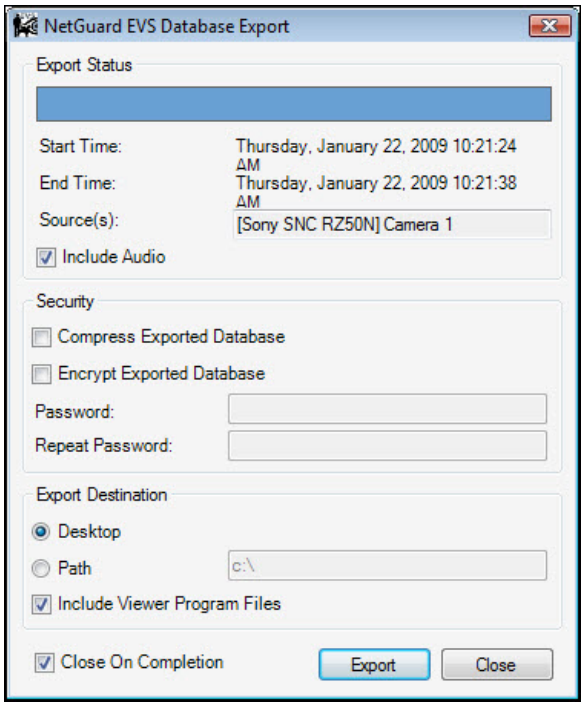


Figure 29 Database Export

The fields within the pop-up can be defined as follows:

Export Status	
Start Time	Read-only display of selected Start Date and Time
End Time	Read-only display of selected End Date and Time
Source	Read-only display of selected source (camera)
Include Audio	This checkbox gives you the option to include audio with the video.
Security	
Compress Exported Database	Click this box to compress the exported database. (Compression reduces file size by approximately 10% but the length of the export process will increase)
Encrypt Exported Database	Click this box to assign a password to protect access to this video information.
Password	Enter the password the recipient of the video should use to access the video data.
Repeat Password	Re-enter the password for verification.
Export Destination	
Desktop	Select this radio button to save the file to the Desktop in the folder “Exported Images”

Path	Select this radio button to specify where the “Exported Images” folder should be located
Include Viewer Program Files	If this box is checked, a stand-alone Viewer application will be included in the export.
Close On Completion	If you click this checkbox, the NetGuard EVS Database Export dialog box will automatically close when the export is done.

5. Select the desired options from the *NetGuard EVS Database Export* dialog box.
6. Click **Export**.
   - An Export status bar will display showing the progress of the export.
   - The files can be copied to a CD or other media.
   - If the database was encrypted, be sure to communicate the password to the user under a separate delivery method.
7. When the export is complete, view the exported clip by opening the Exported Images folder in the location specified and double-clicking the ***Viewer.exe*** file.
8. If the clip is encrypted, enter the password.
   2. The *NVR Viewer* opens and the clip is displayed.

Using the NVR Viewer

The *NVR Viewer* is a standalone application which supports browsing and playback of NetGuard or NetGuard EVS video recordings. It is installed when you install NetDVMS, NetDVR or ProSight-SMB. The *NVR Viewer* also lets you print still images, send still images via e-mail and export entire video and audio sequences in a variety of formats.

***Note**:*
Once a video surveillance environment is set up and running, if it is necessary to view directly from the NVR server, it is recommended to do so using the NVR Viewer as opposed to installing a client application such as NetGuard EVS.

Accessing the Viewer

Access to the *NVR Viewer* can be done either:

1. From the Windows menu on the NVR Server:

   Select ***Start > All Programs > NetDVMS > Viewer***

   (Substitute NetDVMS with NetDVR or ProSight-SMB in applicable environments)

2. From exported video evidence:

   - If the video files are stored on a CD, the *NVR Viewer* may start automatically when the CD is inserted in the drive.
   - Or double-click the ***Viewer.exe*** file in the collection of video evidence files.

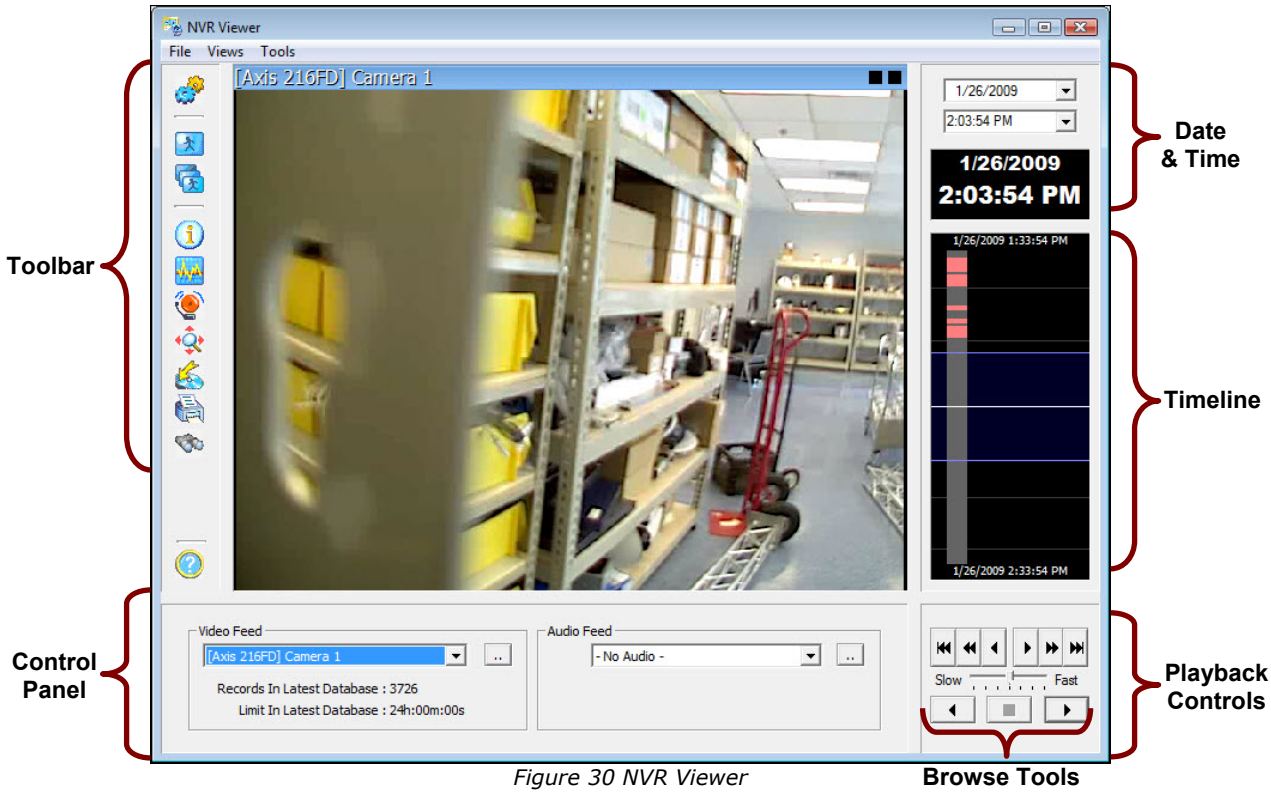


Figure 30 NVR Viewer

Viewing Archived Video

If the archived recordings are stored locally or on network drives, you can use *NetGuard EVS* or the *NVR Viewer* to browse the recordings. If the archives, however, are stored on a CD, you must use the *NVR Viewer* to browse the video.

Toolbar

The *Viewer*'s toolbar lets you quickly switch between the *Viewer*'s different features. Icons in the toolbar serve as shortcuts to the features available from the *File* and *Tools* menus in the *Viewer*'s menu bar.

When you select a feature in the toolbar, settings for the feature typically become available in the *Viewer*'s control panel, located in the lower part of the window, below the camera layout. Depending on your rights, not all of the following toolbar icons may be available to you.

Settings: Opens the *Viewer*'s *Settings* control panel, in which you are able to specify settings for the camera layout, and specify the time span for use in the *Viewer*'s timeline browser.

Single View: Switches to a single, enlarged view of video from the camera selected in the camera layout. You may also simply double-click a camera in the camera layout to switch between single view and multi view.

Multi View: Switches to multi-view, displaying all cameras in the selected camera layout view. You may also simply double-click a camera in the camera layout to switch between single view and multi view.

Database Information: Opens the *Database Information* control panel, in which you select the cameras you want displayed in the camera layout.

Motion View: Opens the *Motion View* control panel, in which you are able to view a graph displaying video sequences with motion. You may click and drag the graph allowing you to browse the sequences.

Alarm Overview: Opens the *Alarm Overview* control panel, which you are able to view a list of detected motion and events. By clicking motion detections or events in the list, you are able to browse recordings from around the time at which the motion or events occurred.

Image Controls: Opens the *Image Controls* control panel, in which you have access to digital zoom and interlacing settings.

Export: Opens the *Export* control panel, with which you are able to export entire video and—if applicable—audio sequences in different formats.

Print: Opens the *Print* control panel, from which you are able to print still images from the camera selected in the camera layout.

Smart Search: *Only available when the Viewer is used with certain surveillance systems*. Opens the *Smart Search* control panel, in which you are able to search for

motion in one or more selected areas of the view from a particular camera.

***Send E-mail Report*:** Opens the *Send E-mail Report* control panel, from which you are able to send evidence via e-mail.

NetTransact: *Only available when the Viewer is used with certain surveillance systems*. Opens the *NetTransact* control panel, from which you are able to specify settings for the NetTransact add-on product for handling loss prevention through video evidence combined with time-linked POS or ATM transaction data.

***Help*:** Opens online help. Alternatively, press your keyboard's F1 button to access help.

Browsing Video

Use the items found in the **Browse Tools** panel to review video:

- Select a specific date or time from the date and time drop-down menus.
- Click and drag the timeline to advance the video forward or backward.
- Use the Playback controls

Export Video

The *NVR Viewer* support export to .AVI, Database and .JPG.:

To Export Video

1. Click the *Export* Video icon.

   ➲ The bottom section of the NVR Viewer interface changes:

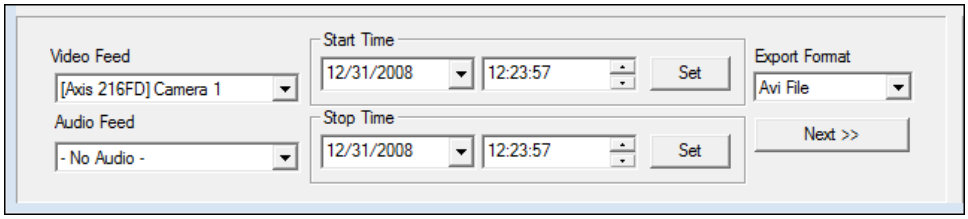
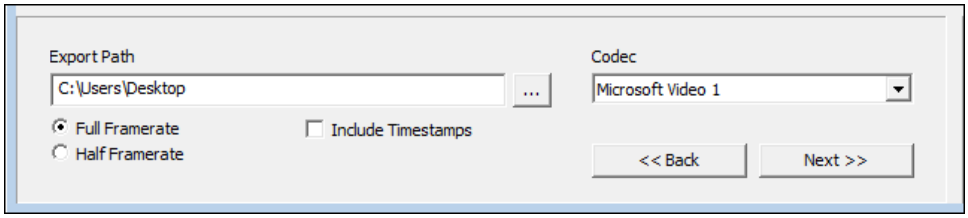


Figure 31 Exporting Video with NVR Viewer

2. Verify the output from the **Video Feed** drop-down menu. Change if necessary.
3. If supported, select the desired **Audio Feed**.
4. Select the desired **Start Time** for the export:
   a. Either select the start date and time directly from the drop-down menus or
   b. Use the timeline to click and drag to the desired start time.
5. Click the **Set** button in the **Start Time** section.

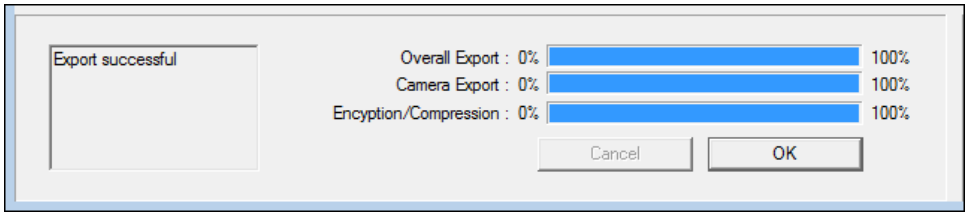
6. Select the desired **Stop Time** for the export:
    a. Either select the stop date and time directly from the drop-down menus or
    b. Use the timeline to click and drag to the desired end time.
7. Click the **Set** button in the **Stop Time** section.
8. Select the file format for the exported file from the **Export Format** drop-down menu.
9. Click **Next**.

    ➲ The screen changes and the following is displayed:



10. Verify or modify the **Export Path**.
11. Select **Full** or **Half Framerate**.
12. If you want a timestamp included on the exported video, click the **Include Timestamps** checkbox.
13. Select the **Codec** you wish to use.
14. Click **Next**.

    ➲ The screen changes displaying the export status:



15. Click **OK**.

Help

At any point while working with an OnSSI application, if you need additional support, press the **[F1]** function key. Context sensitive help will appear.

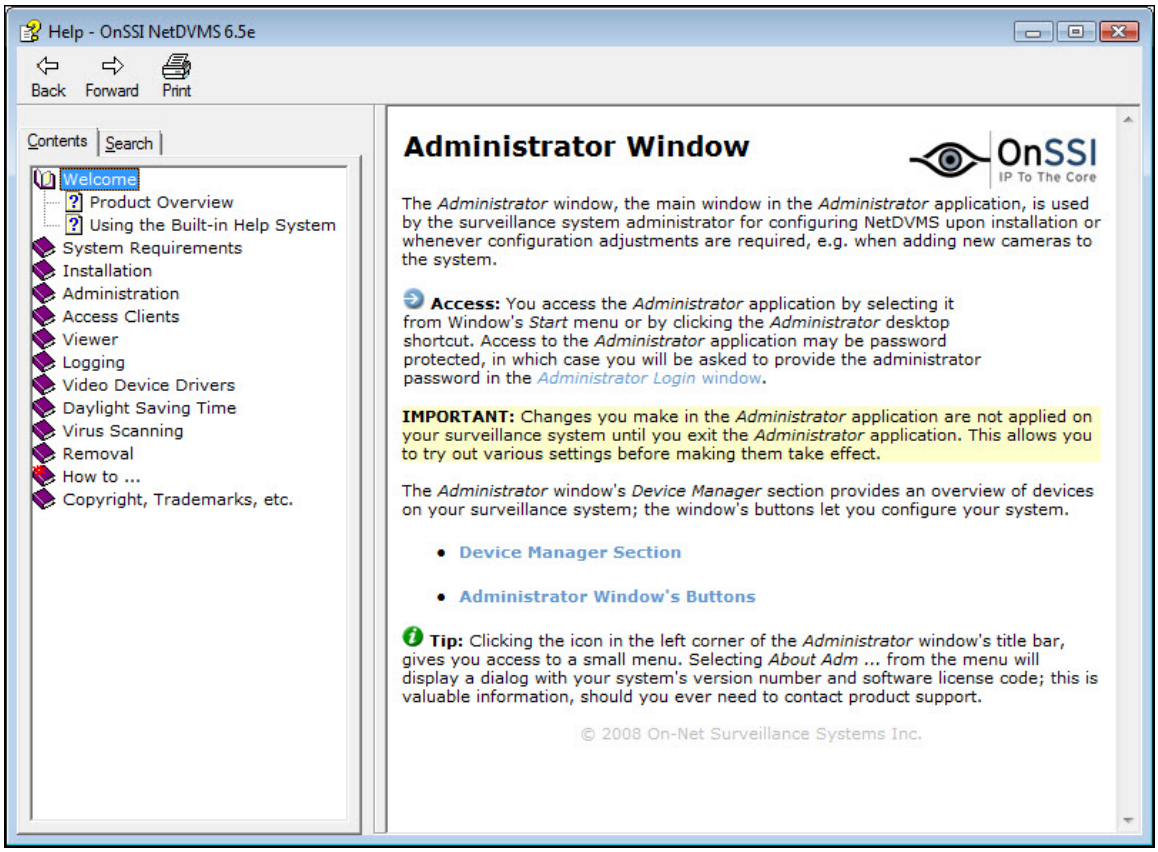

Help - OnSSI NetDVMS 6.5e
Back
Forward
Print
Contents
Search
Welcome
Product Overview
Using the Built-in Help System
System Requirements
Installation
Administration
Access Clients
Viewer
Logging
Video Device Drivers
Daylight Saving Time
Virus Scanning
Removal
How to ...
Copyright, Trademarks, etc.
Administrator Window
OnSSI
IP To The Core
The Administrator window, the main window in the Administrator application, is used by the surveillance system administrator for configuring NetDVMS upon installation or whenever configuration adjustments are required, e.g. when adding new cameras to the system.
Access: You access the Administrator application by selecting it from Window's Start menu or by clicking the Administrator desktop shortcut. Access to the Administrator application may be password protected, in which case you will be asked to provide the administrator password in the Administrator Login window.
IMPORTANT: Changes you make in the Administrator application are not applied on your surveillance system until you exit the Administrator application. This allows you to try out various settings before making them take effect.
The Administrator window's Device Manager section provides an overview of devices on your surveillance system; the window's buttons let you configure your system.
Device Manager Section
Administrator Window's Buttons
Tip: Clicking the icon in the left corner of the Administrator window's title bar, gives you access to a small menu. Selecting About Adm ... from the menu will display a dialog with your system's version number and software license code; this is valuable information, should you ever need to contact product support.
© 2008 On-Net Surveillance Systems Inc.

Figure 32 Online Help

NetGuard EVS help works similar to most help systems in that you can navigate throughout the content via:

- Table of Contents
- Search Tab
- Embedded Links

In addition to online help, the full User Manuals and Quickstart Guides for our applications are available for download in PDF format from the www.onssi.com website.

Module 4

Events

Objectives:

- Understanding Event Types
- Configuring Events in NetDVMS
- Viewing Event Data with NetGuard EVS

Events

A benefit and power of IP video monitoring software includes the ability to avoid having an operator monitor video output 24/7. The typical time where fatigue and boredom sets in for humans watching surveillance video is 20 minutes. Therefore, configuring the video monitoring software to react to specific events is key to configuring a worthwhile and robust video surveillance system. There are several types of events supported in OnSSI software.

Three (3) components to consider for an event:

1. **Input**

   Data generated from a variety of sources can generate an event. Some examples include: motion, dry contact, and ASCII text strings from another device.

2. **Event**

   Events register triggers in the NVR software. These can be used to initiate actions automatically. These can include:

   - Starting or stopping recording on cameras
   - Send an email or SMS message
   - Make a PTZ camera move to a specific preset position
   - Push the image to a NetMatrix user
   - Activate output

3. **Output**

   On devices with supported output ports, actions such as activating lights, alarms or sirens may result from the triggering of an event.

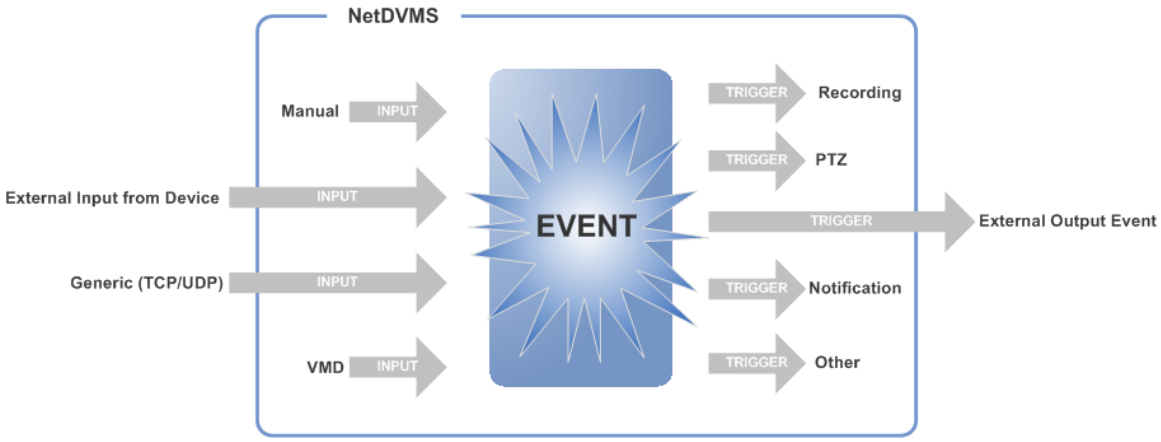


Figure 33 Event Flow

Types of Events

There are four (4) types of events that are recognized and monitored within OnSSI software as *input* events. Two of these are internal to the NVR software and two are external:

External to the NVR Software

1. **External Input Events from a Camera**: These are events based on data received from a camera's input port. Not all cameras support this feature. An example would be a sensor attached to a window or door or a security card access system. Additionally, some devices have their own capabilities for detecting motion, moving objects or even static objects (typically configured in the device's proprietary software). These too are considered input events.

2. **External Input Events from an ASCII text string**: These are events received in UDP or TCP format from an external system. These strings can be analyzed to determine if a match to specified criteria is met. For example: a door using a card swipe system can be configured to send its events in a text string (ASCII) format to the NVR. Each string received can be examined for a specific word or phrase to indicate a desired action and then trigger a corresponding reaction (e.g. move the camera to a preset position and begin recording).

Internal to the NVR Software

3. **VMD Events (Video Motion Detection)**: These events are based on the NetDVMS/NetDVR/ProSight-SMB software detecting motion on a camera.

4. **Manually Triggered Events**: These events are pre-configured in NetDVMS/NetDVR/ProSight-SMB and allow a user to trigger the event manually from the client software.

> ***Note:***
>
> ***This guide assumes that the OnSSI NVR, NetDVMS 6.5x is in use.***

Event Configuration

Configuring events is performed through function buttons found in NetDVMS *Administrator*. For more information on configuring events, see the *NetDVMS User Manual*.

Generic Events

As previously mentioned, Generic Events are those which use input from an external source in order to trigger an event. Example of external sources can be: alarm systems, access control systems, etc.

You will notice Generic Events in NetGuard EVS through:

- When browsing video, you can browse by any event, including a Generic Event
- When viewing the indicators on the Image Bar of a video pane, the event indicator will trigger for Generic Events
- Video may be pushed via NetMatrix by the triggering of a Generic Event

Input Events

Input Events are specific to each device. Some examples are:

- Object detection
- Motion detection
- Camera tampering
- Device rebooting
- Audio rising or falling below a set decibel level
- Video signal rising or falling

You will notice Input Events in NetGuard EVS through:

- When browsing video, you can browse by any event, including an Input Event
- When viewing the indicators on the Image Bar of a video pane, the event indicator will trigger for Input Events
- Video may be pushed via NetMatrix by the triggering of an Input Event

VMD Events

Video Motion Detection (VMD) events are triggered when motion is detected on the camera by the NVR. By default, a VMD event is automatically created within NetDVMS for each camera upon its installation. This event can trigger recording in OnSSI client software as configured in **Settings** within NetDVMS *Administrator*.

You will notice VMD Events in NetGuard EVS through:

- When browsing video, you can browse by any event, including a VMD Event
- When viewing the indicators on the Image Bar of a video pane, the event indicator will trigger for VMD Events
- Video may be pushed via NetMatrix by the triggering of a VMD Event

- VMD events automatically starts the recording process. Therefore, each video Sequence is triggered by a VMD Event.

Event Buttons

Event buttons are events that can be manually triggered from within NetGuard EVS. These events may be specifically associated with a particular camera or set on a system wide basis. Event buttons are configured in the NetDVMS *Administrator* module.

To Use An Event Button:

1. In the ***Live*** tab of NetGuard EVS, expand the **Event** section on the Function Pane.
2. Click the arrow for the *Events* drop-down menu.
3. Select the *Event Button* for the event you wish to initiate.
4. Click **Activate**.

Output Event

Outputs are used for activating outputs external to NetDVMS such as switching on lights or sounding a siren. Output events are configured in the NetDVMS *Administration* module.

To Use An Output Event:

1. In the ***Live*** tab of NetGuard EVS, expand the **Output** section on the Function Pane.
2. Click the arrow for the *Outputs* drop-down menu.
3. Select the *Output event* you wish to initiate.
4. Click **Activate**.

For more information on events, see the *NetDVMS User Manual*.

Module 5

Pushing Video

Objectives:

- Configure NetMatrix
- Configure NetGuard EVS to receive pushed video

What is Pushing Video?

When multiple users are connected to an NVR, one user may select a video stream they are viewing and send it to another user's computer monitor so that the second user may also view the video. Or, when configured properly, an event may occur which will cause video from a specific camera to automatically appear on any user's screen when otherwise the screen would be blank ("blank screen monitoring"). This is called "pushing video" (manual and automatic respectively).

Pushing video is possible by using OnSSI's add-on software module, NetMatrix. NetMatrix is included with NetDVMS and NetDVR and installed when the NVR software is installed. Configuring NetMatrix is done in the NVR *Administrator* module and viewing may be done in NetGuard EVS. There is also a NetMatrix *Viewer* that will not be covered in this course.

Configuring A Manual Push Window in NetDVMS

These steps will provide the foundation for pushing video from the OnSSI client application NetGuard EVS.

> ***Note:***
>
> ***This guide assumes that the OnSSI NVR, NetDVMS 6.5x is in use.***

From the NetDVMS *Administrator* module:

1. Click **NetMatrix**

    ➲ The *NetMatrix Configuration* screen appears.

DRAFT

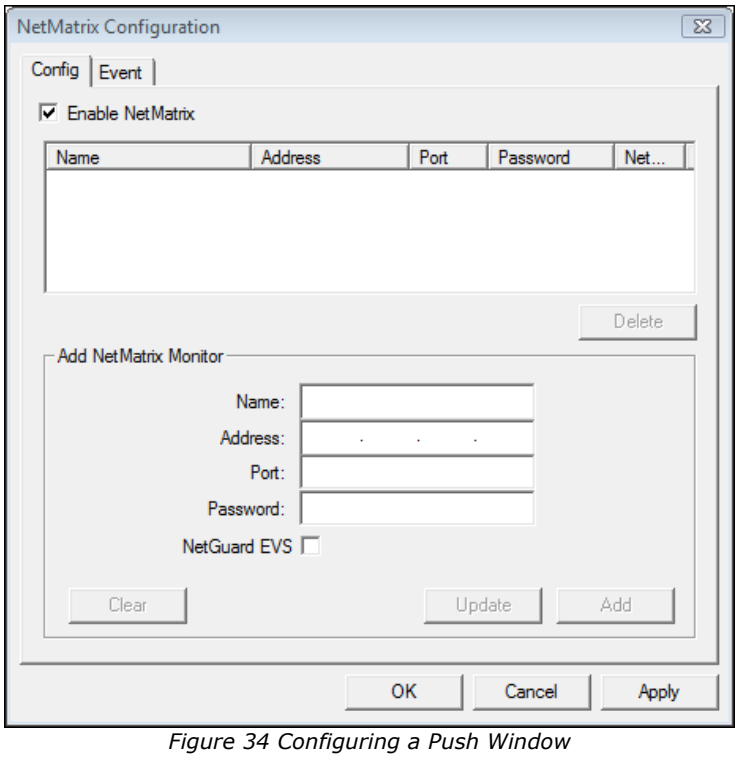


Figure 34 Configuring a Push Window

2. Click the **Enable NetMatrix** checkbox so that it is checked and the remainder of the form becomes enabled.

Below the *Enable NetMatrix* checkbox is a list of all monitors able to receive video. The list is currently blank.

Fill in the fields in the *Add NetMatrix Monitor* section:

3. Enter the **Name** of the PC which will receive video. A descriptive name that easily identifies the target is recommended. For example: Guard #1 Post, Main Entrance, Reception, etc.

4. Enter the **IP Address** for the PC to which you will push video.

5. **Port** – enter any port # that is not in use. It cannot, however, be the same as the *Image Server* Port number. You will need to remember this when you configure the client later. You may use the same port number for all users.

6. **Password** – enter any password. This may be the same or different from your NVR password. You will need to remember this when you configure the client later.

7. Click the **NetGuard EVS** checkbox to enable this function to work in a video client (NetGuard EVS or Ocularis Client Lite).

8. Click **Add**.

    ➲ The *NetMatrix Configuration* screen updates.

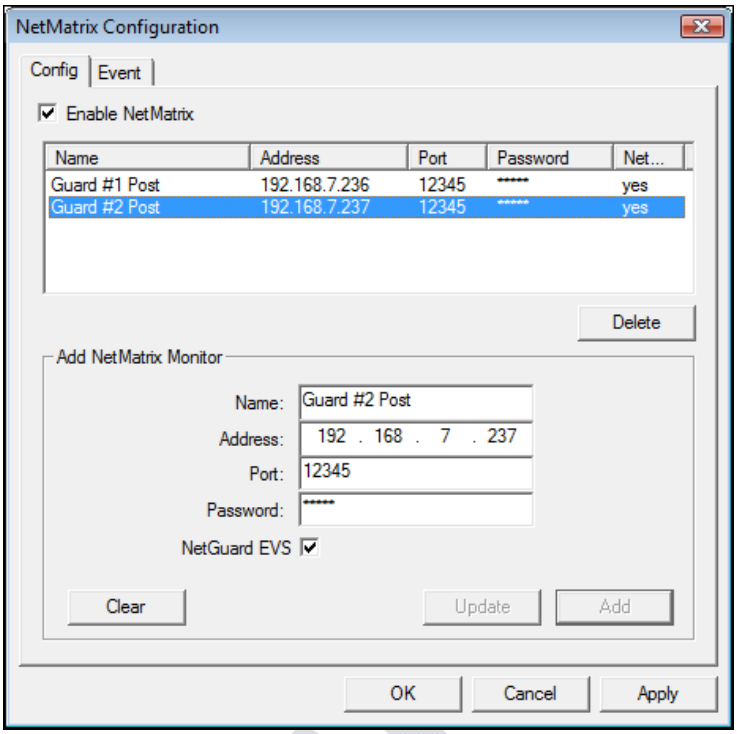


Figure 35 Configuring A Push Window

9. Repeat for all PCs (IPs) to which you will forward video or will receive video from this NVR.
10. Click **Apply**.
11. Click **OK**.
12. Click **Exit**.

Pushing Video to Another User of NetGuard EVS

In order to successfully send video from one PC to another PC, the following conditions must apply:

- Both users must be logged on to the same NVR Server
- When pushing video from one PC to another when using different NVR Servers, the NVR Servers must be a Master & Slave to each other for video to be pushed in two directions.

Therefore, when working in an environment with multiple NVR servers, be sure to set their Master/Slave relationship. See the *NetDVMS User Manual* for information on configuring a Master/Slave relationship.

DRAFT

Configure NetGuard EVS for Push Video

When viewing a client application such as NetGuard EVS, a pane (or "monitor") within a view needs to be configured to specifically accept video being "pushed" from NetMatrix. This applies whether the video is triggered manually or upon the result of a preconfigured event.

To Configure a Monitor in NetGuard EVS to Receive Video

1. Go to the ***Setup*** tab.
2. Create (or modify) a view. In an empty pane, click and drag "NetMatrix" from the **System Overview** section of the *Function Pane*.
3. In the **Properties** section of the NetMatrix pane click the **Connection Settings** button. (**Note**: you may need to minimize other sections of the **Function Pane** in order to see the entire Properties section):
   a. Enter the **TCP/IP Port** used when the monitor was configured in *Administrator*.
   b. Enter the **Password** used when the monitor was configured in *Administrator*.
   c. Click **OK**.
   d. Change the **Image Quality** or **Frame Rate** if desired.
4. Click the ***Live*** tab.

To Manually Push Video to a Monitor using NetGuard EVS

1. In the ***Live*** view of NetGuard EVS, right-click on a window displaying video. (This video will be "pushed" to another user).
   ➲ The right-click menu appears.
2. Select **NetMatrix**
   ➲ A list of all configured monitors appears.
3. Select the monitor to wish you would like to send this video.

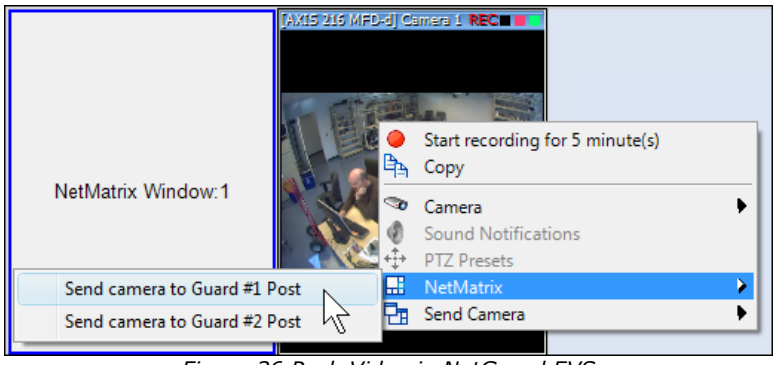


Figure 36 Push Video in NetGuard EVS

➲ The video should appear in the recipient's pane.

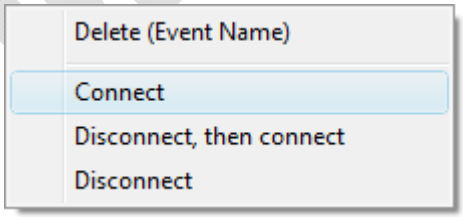
Configuring Event Driven Push Video

Configured events may be included as a trigger to push video to a user. Any event (motion, contact closure, content analytics, access control, etc.) can cause video to be forwarded to a specific monitor. Configuration for this is done in the *Administrator* module of the NVR.

To Configure an Event to Push Video within NetDVMS

From the NetDVMS *Administrator* module:

1. Click **NetMatrix**
   - The *NetMatrix Configuration* screen appears, displaying the list of existing NetMatrix monitors.
2. Click the **Event** tab.
3. Right-click on the monitor you wish to configure.
   - A list of cameras, Generic events and Global events appears.
4. Highlight the desired camera or event.
   - A subsequent drill-down menu appears defining events for the selection.
5. Select the desired event associated with the highlighted item.
   - The event is nested under the monitor selected. A red incomplete (exclamation) symbol ❗ appears. This indicates that configuration is not complete. You must continue until all ❗ symbols disappear.
6. Right-click on the event with the ❗ symbol.
   - The following menu appears:



Items are defined as follows:

Delete	Delete the event from the current configuration
Connect	Connect to a camera (to be determined in the next step)
Disconnect, then connect	Disconnect all NetMatrix feeds and then connect to a camera (to be determined in the next step). This is an attention getting method of pushing video.
Disconnect	Disconnect the video feed from the selected camera

7. Select the desired item from the table above.

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- ➲ For any selection other than ***Delete***, another nested item will appear in the list with a ❗ symbol.

8. Right-click on the item with the ❗ symbol.
   - ➲ A right-click menu appears displaying a list of installed cameras as well as a ***Delete*** option.
9. Select a camera for which you would like to push video (in the case of “Connect”) or cease streaming video (in the case of “Disconnect”).
   - ➲ At this point, there should be no ❗ symbols.
10. Click **OK**.
11. Click **Exit**.

Example

The following example will configure an event driven push based upon motion detection. The end result will be that if motion is detected on Camera A, push the video from Camera B to another PC.

Preparation

In preparation for this exercise, first set a *Video Motion Detection* event on Camera A.

From the NetDVMS *Administrator* module:

1. Select Camera A from the NetDVMS *Device Manager*.
2. Click the **I/O Setup** button.
3. Select Camera A from the *I/O Setup* window.
4. Click the **Add VMD Event (Motion Detection)** button.
5. Click **OK**.

Configure the Event

From the NetDVMS *Administrator* module:

1. Click **NetMatrix**
   - ➲ The *NetMatrix Configuration* screen appears displaying the list of existing NetMatrix monitors.
2. Click the **Event** tab.
3. Right-click on the monitor of another PC.
   - ➲ A list of cameras, Generic events and Global events appears.
4. Highlight Camera A.
   - ➲ A subsequent drill-down menu appears defining events for the selection.
5. Select the **VMD Event**.

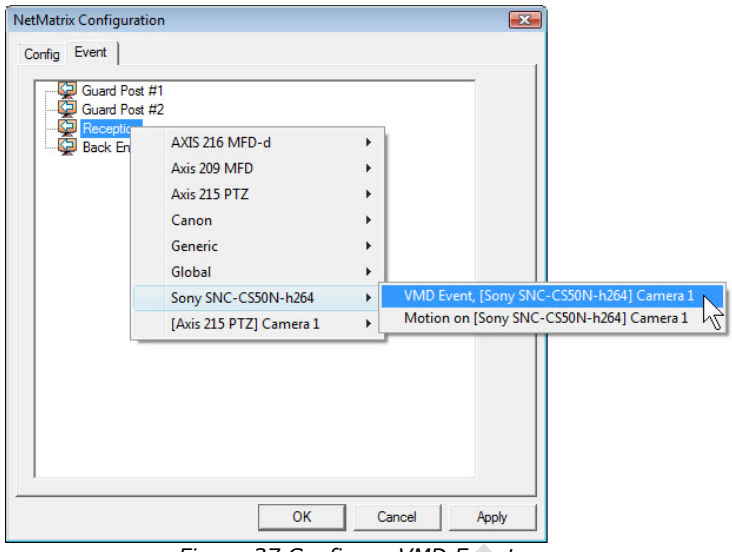


Figure 37 Configure VMD Event

➲ The event is nested under the monitor selected. A red incomplete (exclamation) symbol ❗ appears. This indicates that configuration is not complete. You must continue all ❗ symbols disappear.

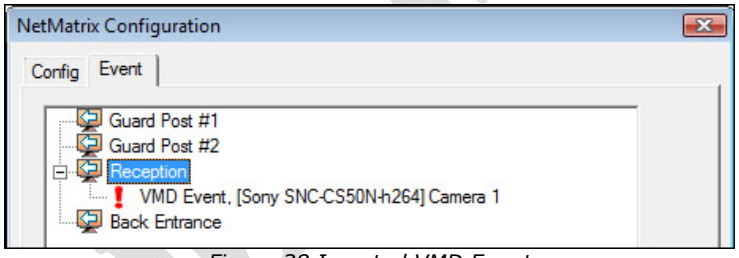
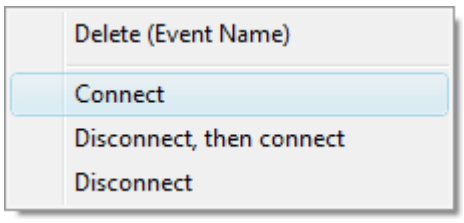


Figure 38 Inserted VMD Event

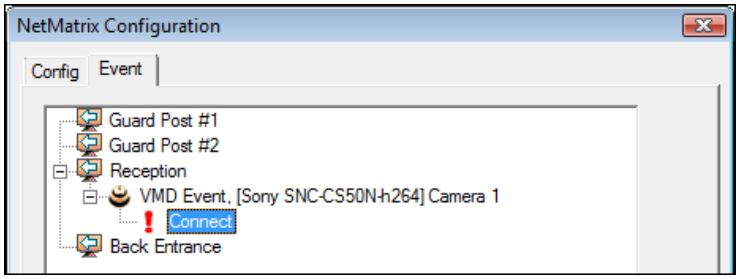
6. Right-click on the event with the ❗ symbol.

➲ The following menu appears:



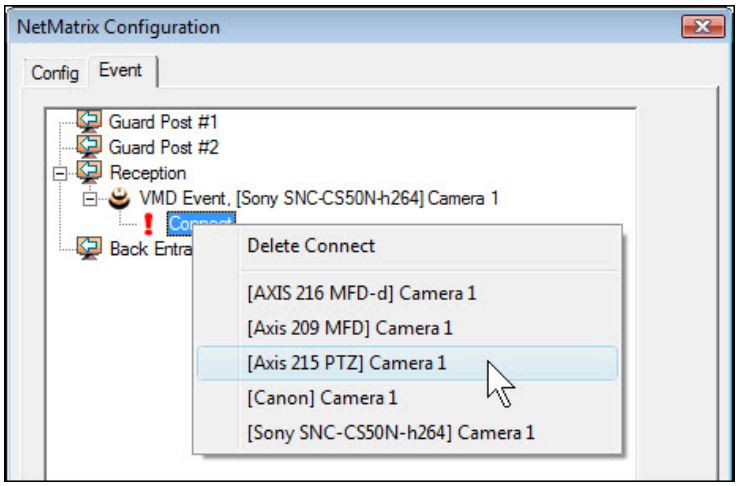
7. Select **Connect**.

➲ The following appears.



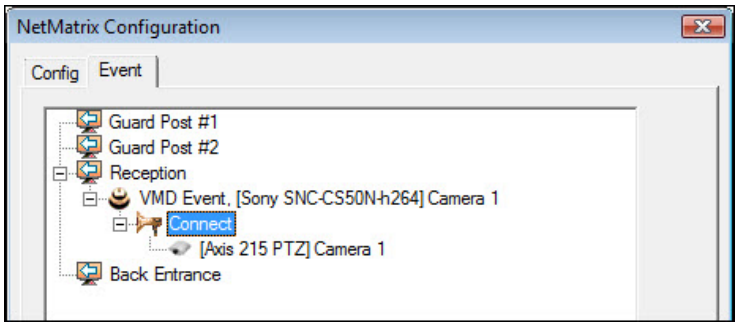
8. Right-click on ! **Connect**.

➲ A right-click menu appears displaying a list of installed cameras as well as a ***Delete*** option.



9. Select Camera B .

➲ At this point, there should be no ! symbols.



10. Click **OK**.

11. Click **Exit**.

Now, when there is motion on Camera A, video from Camera B will appear in the other PC's (as defined in Step 3) NetMatrix pane within NetGuard EVS.